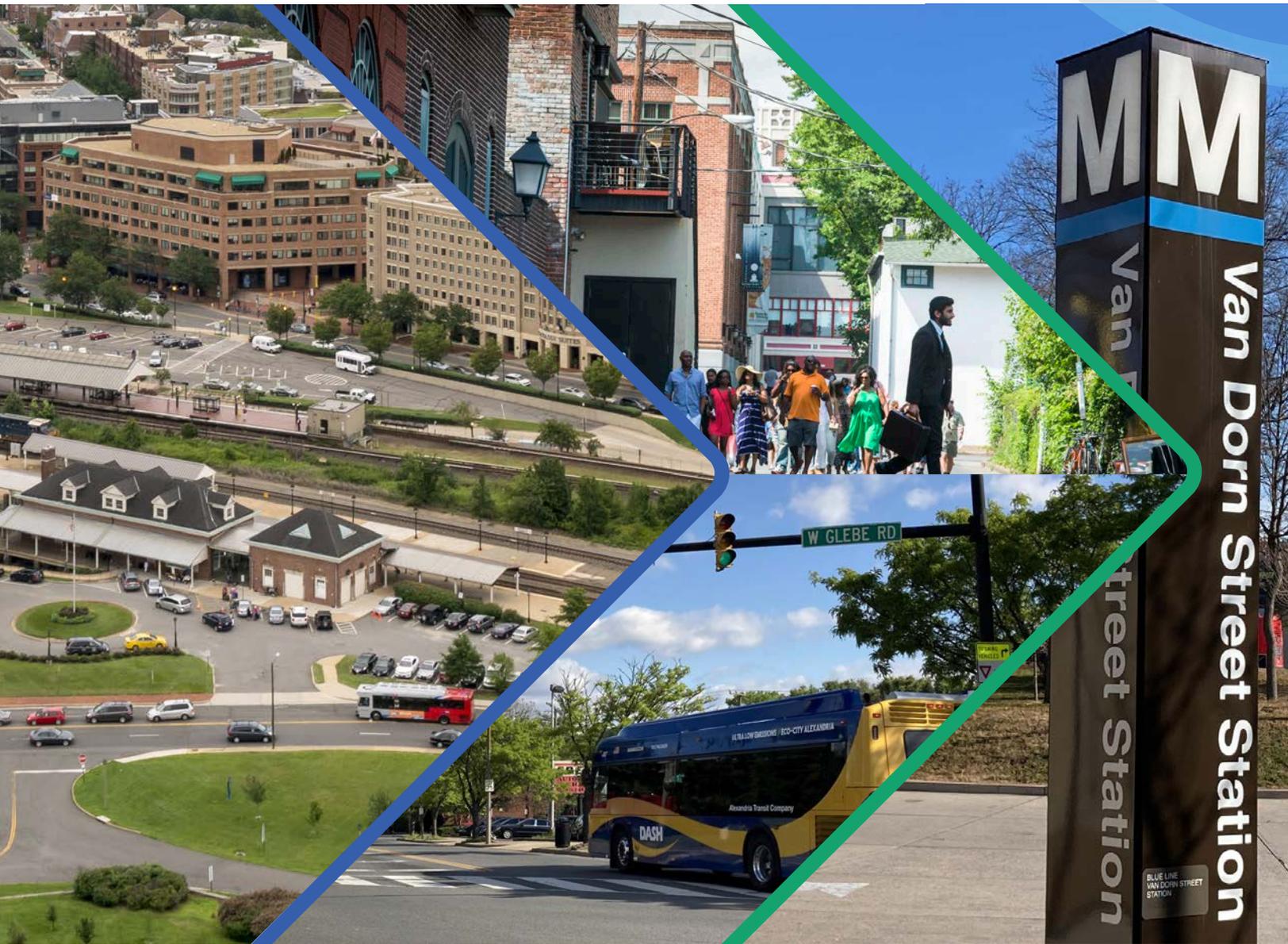


Alexandria Mobility Plan

October 2021



Alexandria
Mobility
Plan



Acknowledgments

The development of the Alexandria Mobility Plan (AMP) would not be possible without the contributions from many individuals and organizations. The City thanks you for your dedication to the AMP development process.

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Community Champions

Alexandria Chamber of Commerce	Alexandria Redevelopment and Housing Authority	Commission on Persons with Disabilities	Homes for America (Brent Place)
Alexandria City Public Schools	Alive!	Community Lodgings	Hopkins House
Alexandria Economic Development Partnership	Bicycle and Pedestrian Advisory Committee	Del Ray Business Association	Tenants and Workers United
Alexandria Housing Development Corporation	Carpenter Shelter	Eisenhower Partnership	Volunteer Alexandria
	Casa Chirilagua	Ethiopian Business Association	West End Business Association
	Commission on Aging - Transportation Committee	Federation of Civic Associations	West End Coalition
			YMCA

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Contents

Overview



Transit

The Transit chapter focuses on making transit more customer-friendly, reliable, and efficient to better serve existing customers and attract new ones.



Smart Mobility

The Smart Mobility chapter focuses on how the City can incorporate technology into the transportation network to better manage traffic.



Streets

The Streets chapter seeks to identify ways to make City streets function better for all users, with the goal of making the street network more efficient and safer.



Pedestrian and Bicycle

The Pedestrian and Bicycle chapter reflects the integration of the Pedestrian and Bicycle Chapter update in 2016 into the format of the AMP, while continuing to track progress since 2016 and highlighting the remaining priorities.



Supporting Travel Options

The Supporting Travel Options chapter focuses on how the City can support alternatives to driving alone through information, incentives, partnerships, and policies.



Curb Space and Parking

The Curb Space and Parking chapter focuses on how the City can use parking to help achieve its goals and manage competing demands for limited curb space.

Moving Forward

Appendix I: Implementation

Appendix II: Monitoring, Reporting, and Key Performance Indicators

Appendix III-A: Civic Engagement Process Summary

Appendix III-B: Civic Engagement Findings Summary



We are excited to share the draft Alexandria Mobility Plan (AMP) with you. As a growing city with a constrained street network, we face difficult challenges when it comes to how we move. The AMP puts Alexandria in a strong position to address our transportation challenges now and into the future by focusing on choice and giving you more and better choices for getting you where you want to go. An intentional effort for consistency between the visions of related plans, such as the City Strategic Plan, City Master Plan, and Environmental Action Plan, ensures we are meaningfully working toward citywide goals to support overall livability, equity, quality of life, and mobility for the community.

This plan was developed during the 2020 COVID-19 pandemic, which dramatically changed travel patterns and the way we live our lives. The AMP recognizes that there will always be unknowns and that the City must seek to understand potential scenarios and plan for flexibility, adaptation, and resilience.

Yon Lambert, AICP

Director, Department of Transportation and Environmental Services

The process to update and modernize the 2008 Transportation Master Plan led to thousands of interactions with Alexandrians from all backgrounds and neighborhoods, informing and educating us on community experiences, needs, and aspirations for the future of mobility. Overwhelmingly, we heard from you about the need to manage congestion and cut-through traffic, improve public transit, and make streets safe for all users. The AMP includes policies and strategies to mitigate the effects of regional traffic on our streets, make transit more convenient and accessible, consider all types of travelers from all parts of the community when designing our services and our streets—all in a way that promotes access and equity, getting you where you need to go safely and efficiently no matter which mode of transportation you use.

The release of the draft AMP does not mark the end of our collaboration. The advancement of the AMP, its policies, and its strategies in the years to come will require continued partnership with the community. With a shared vision and direction, we will work to meet our needs together with strategic decisions that will affect mobility in the city over the next decade.

Melissa McMahon

Chair, Transportation Commission

Credit: Hover Solutions for Visit Alexandria

Setting the Stage

The Alexandria Mobility Plan (AMP) is a strategic update to the City's 2008 Transportation Master Plan. By using the term "mobility," this update emphasizes the importance of providing useful options to allow people to have the freedom to choose how to get around. The AMP is not a list of specific projects such as the Capital Improvement Plan or mode-specific plans¹; instead, it lays out the policies and strategies that will guide transportation decisions for the next 10 years in pursuit of enhanced quality of life, sustainability, and equity, centered around the concept of choice.

Mobility vs. Transportation

On its most basic level, **transportation** is the simple act of moving people or goods from one location to another. Streets, sidewalks, buses, and trains are examples of infrastructure and options that help facilitate transportation, the existence of which alone does not equal mobility.

Mobility is about freedom of movement and having access to many transportation options that work for you, as well as the quality of those options to give you the ability to get you where you need to go. To have mobility is to be able to safely and affordably get to the resources that enable a fulfilling and healthy life—jobs, school, grocery store, doctors' office, pharmacy, daycare, community centers, parks, and more.

1. <https://www.alexandriava.gov/TransportationPlanning>.



Accomplishments Since 2008

The City has made great strides in realizing the vision of the 2008 Transportation Master Plan in the years since its adoption.²

2008 Transportation Master Plan Actions and Strategies

	Complete	Ongoing	Started
Transit Concept Plan			
T1. Public outreach to educate and determine where the greatest support lies for implementation	✓		
T2. Coordination with adjacent jurisdictions to ensure integration with existing transit services and future regional connections		✓	
T3. Prioritize transit corridors for investment	✓		
T4. Develop corridor-specific plans for dedicated transit lanes, ensuring new developments do not preclude dedicated transit lanes	✓		
T5. Identify locations for smart stations that will serve both the new system and existing transportation modes	✓		
T6. Ensure that development and redevelopment does not preclude efforts to expand public transit infrastructure		✓	
T7. Identify specific transit mode technology and newest techniques best suited for transit corridors and for the system as a whole	✓		
T8. Integrate existing DASH bus service with new transit system elements for DASH to serve as a high-frequency feeder system		✓	
T9. Incorporate traffic signal priority, traffic circulation changes, pedestrian and other on-street enhancements		✓	
T10. Create TMPs, Transit Overlay Zoning Districts, Parking Management Zones, etc. to coordinate efforts to support the system	✓		
T11. Investigate potential funding available through existing, new, and innovative revenue sources		✓	
T12. Develop extensive public outreach and marketing campaign to energize the citizenry around Alexandria's transportation future	✓		
T13. Coordinate with pertinent Boards and Commissions to ensure that the special transportation needs of all citizens are considered	✓		

2. The 2008 Transportation Master Plan's Pedestrian and Bicycle Concept Plans have been superseded by the City's Pedestrian and Bicycle Chapter update in 2016 to reflect changes that have occurred since 2008, including the Complete Streets policy, Capital Bikeshare program, and on-street bicycle facilities. The most recent biennial progress reports of project implementation can be found [here](#).

- 1 The Route 1 Metroway between Alexandria and Arlington opened in 2014 and provides bus rapid transit (BRT)-style service with bus-only lanes along much of its route.
- 2 Alexandria's Complete Streets Policy was adopted in 2011, and along with subsequent design guidelines and Vision Zero efforts, helps guide street improvements that enhance safety for all users.
- 3 Construction on the new Potomac Yard Metrorail Station between National Airport and Braddock Road on the Blue and Yellow lines began in 2019.

2008 Transportation Master Plan Actions and Strategies

	Complete	Ongoing	Started
Streets Actions and Strategies			
S1. Ensure that streets safely accommodate all users		✓	
S2. Formally develop and adopt a "Complete Streets" Policy	✓		
S3. Develop new and enhance existing education programs to market and educate the public on travel demand management (TDM) strategies		✓	
S4. Improve mobility through development of a comprehensive policy for incorporating technology into transportation infrastructure		✓	
S5. Improve safety at signalized intersections		✓	
S6. Focus on improvements to natural and human environment, preservation of historic resources, and creation of enjoyable public street spaces		✓	
S7. Develop a comprehensive design manual for City streetspace	✓		
S8. Explore opportunities to enhance the use of HOV lanes for periods of peak travel demand			✓
Parking Actions and Strategies			
P1. Complete a comprehensive study of City parking supply, demand, and parking policies	✓		
P2. Develop and implement guidelines and requirements for transit-oriented development (TOD) including max parking ratios, unbundled parking, and parking cash-out programs		✓	
P3. Ensure parking availability within the City's commercial, residential, and tourist districts through the development of a curb space management program		✓	
P4. Implement policies to discourage the development of surface parking lots	✓		
P5. Increase the use of information technology to provide real-time parking location and availability information		✓	
P6. Educate the property development and management community about unbundling parking from building leases		✓	
P7. Seek parking and transit solutions to minimize, if not eliminate, tour bus traffic in the residential areas of Old Town Alexandria	✓		



Shaping the Plan: Trends in Mobility

Several major forces are shaping how Alexandria is planning for its mobility needs now and into the next decade.

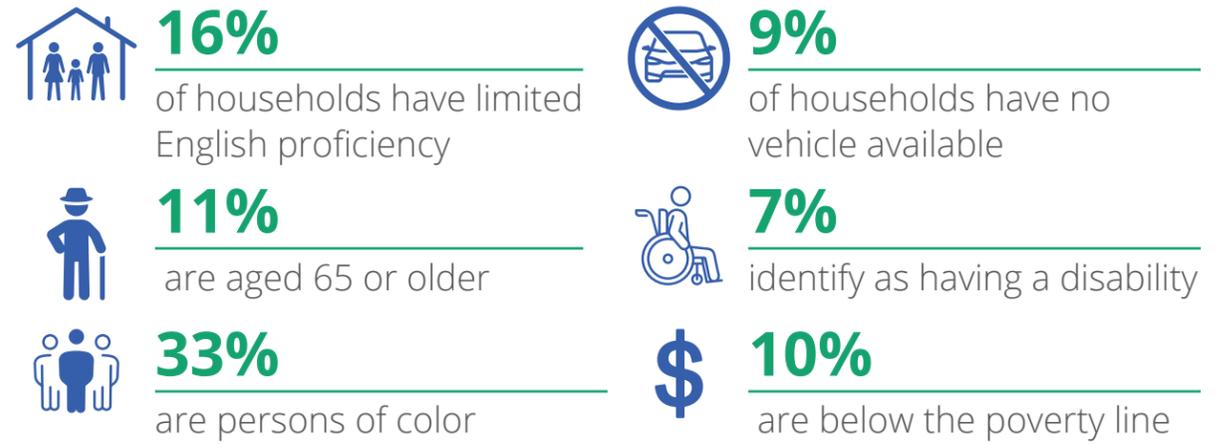
- Among the AMP’s core components is a recognition that not everyone who needs to travel in Alexandria has the same means, ability, or schedule
- Population and employment growth both locally and across the region require that the City manage demand on local streets and provide a range of options for getting around to keep Alexandria a desirable place to live, work, and visit
- Goals, targets, and actions of the Environmental Action Plan require that the City seek to minimize the carbon footprint of the transportation sector in light of the Climate Emergency declared by City Council
- Emerging technology related to monitoring traffic, new ways to get around, and data sharing provides new opportunities for addressing our mobility needs

The COVID-19 pandemic, which was a prominent influence during the bulk of the AMP planning process, is likely to have many long-term impacts to transportation and mobility, such as **increased rates of telework** and **more trips that occur outside of the traditional morning and evening rush hour**. Despite this, it will continue to be important for cities to provide a wide range of mobility options, especially to **ensure equity for their essential workers** who do not have the luxury of telework and more often rely on public transit and other non-motorized modes of transportation. By focusing more on all-day trip-making, this plan is preparing the City for a likely “new normal” with less drastic differences between peak and off-peak travel.

Planning for All

Alexandria is a diverse community with diverse needs

It is important that the City meet the needs of the Alexandria community, with intentional and focused attention to historically under-resourced communities to overcome existing disparities and achieve transportation equity. Of Alexandria’s citywide population:



Source: 2019 American Community Survey 5-Year Estimates, U.S. Census Bureau

Much of the transit network in the region—one of the major methods of combating traffic congestion—is centered around serving the commuting needs of 9-to-5 workers bound for the District of Columbia. Alexandria, however, has a significant population of workers with nontraditional work schedules who commute outside of the typical “rush hour.” Alexandria also has a sizeable population that does not have access to a car for work or nonwork trips that occur off-peak, when public transit is running less frequently or not at all.



A Growing Region

Alexandria plans for growth in transit-rich locations



In Alexandria and the region, residential population growth has been about 1.5% per year since 2010. This growth rate is expected to continue through 2030.



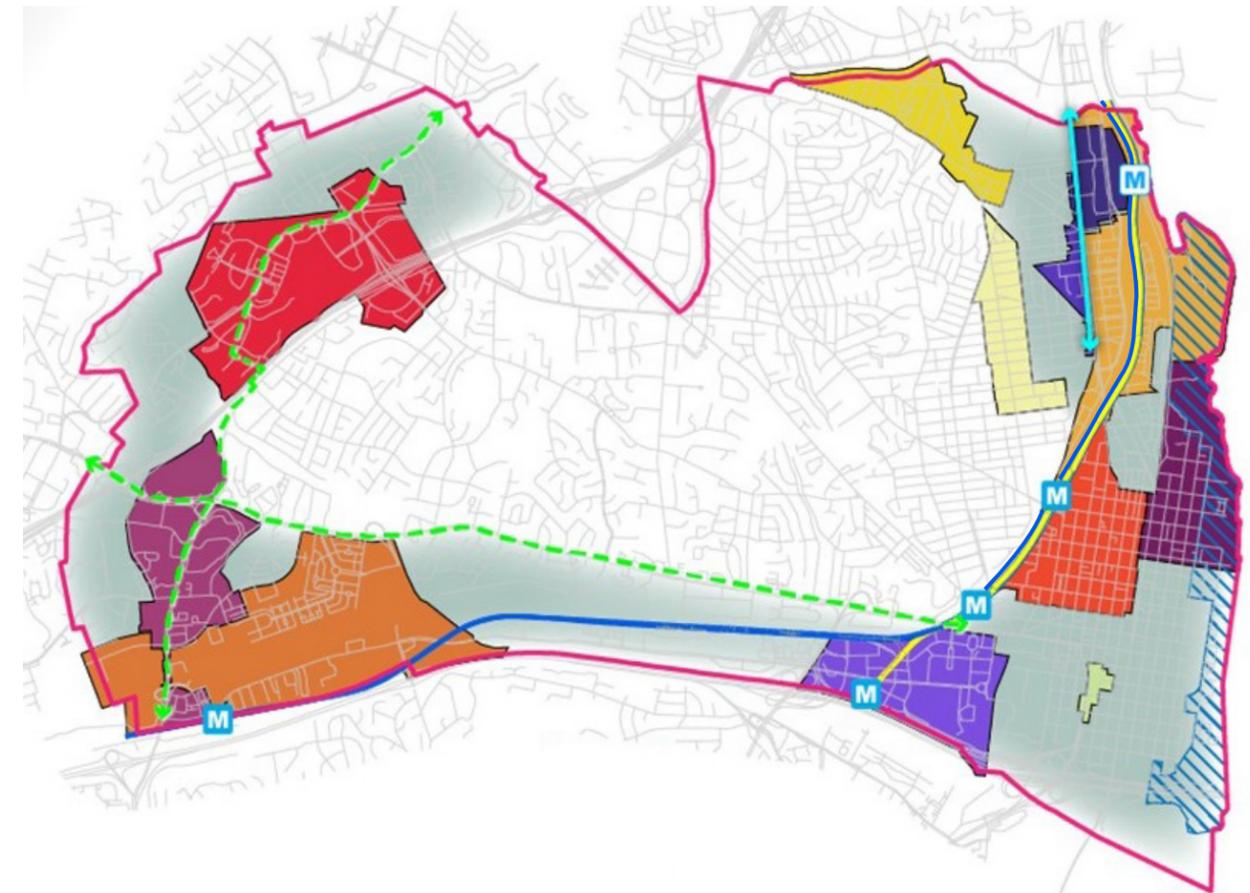
Employment in Alexandria is forecasted to increase 1% per year through 2030.

The City routinely updates its Small Area Plans for specific neighborhoods that are anticipating growth and redevelopment. These community-driven plans outline neighborhood visions and provide guidance on levels and types of development. These planning efforts result in a concentration of diverse land uses and development density that will have access to existing and planned high-capacity transit hubs and corridors such as Metrorail stations and bus rapid transit (BRT) lines. This will minimize the impact of new development on the street network, create opportunities for people to move using different travel choices, and improve connections for both drivers and non-drivers.



Major employers are choosing Alexandria for their growth and expansion, most notably in Potomac Yard and Oakville Triangle, near both the Route 1 Metroway corridor and the Potomac Yard Metrorail station, and at the former Landmark Mall site near both the Van Dorn Metrorail station and the planned West End Transitway corridor.

Small Area Plans and Planned Development



- Existing Metroway
 - Proposed BRT Lines
 - Metrorail Line
 - Existing Metrorail Station
 - Future Metrorail Station
- Color-Shaded Areas Indicate Locations of Small Area Plans or Planned Development

Transportation and the Environment

Transportation is the second-largest source of greenhouse gas (GHG) emissions in the region, most notably due to the use of private automobiles³

Transitioning to an electric vehicle fleet is a major way to reduce the environmental impact of the transportation sector, particularly as the electric energy sector transitions to renewable energy. However, electric vehicles still present many of the adverse effects and risks of traditional vehicles, such as the need for costly, space-intensive, and environmentally unfriendly parking structures, traffic congestion, crashes, non-tailpipe pollution, high personal or household financial costs, and inequitable access.

 42% of regional GHG emissions are from transportation and 60% of those are from passenger cars and trucks

 0.5% of cars in Alexandria are electric

 Alexandria residents are adopting electric vehicles at a faster rate than the national average — 5% versus 2% nationally⁴

The City is updating its **Energy and Climate Change Action Plan** during 2021-2022, which is anticipated to identify further action needed to reduce the climate impacts of transportation in the city to achieve adopted GHG mitigation targets.

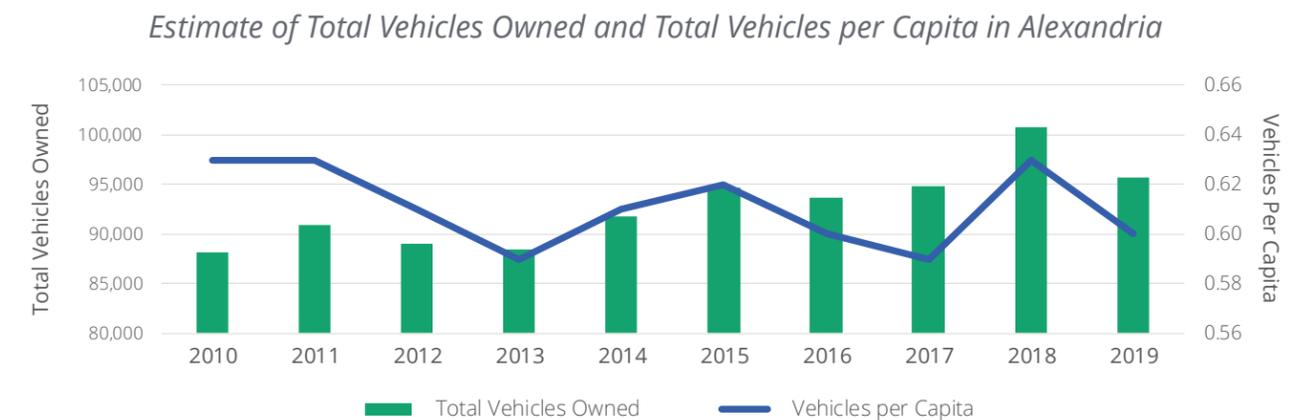
3. City of Alexandria Community-Wide Greenhouse Gas Inventory [https://www.alexandriava.gov/uploadedFiles/tes/eco-city/Alexandria%202018GHG%20Factsheet_FINALene%20\(1\).pdf](https://www.alexandriava.gov/uploadedFiles/tes/eco-city/Alexandria%202018GHG%20Factsheet_FINALene%20(1).pdf).
 4. Electric Vehicle Charging Infrastructure Readiness Strategy, 2021 - https://www.alexandriava.gov/uploadedFiles/tes/eco-city/info/Alexandria_EVRS_FINAL.pdf.

The City and DASH are working to electrify their fleets and expand adoption of electric vehicles through a variety of measures identified in the Environmental Action Plan and the Electric Vehicle Charging Infrastructure Readiness Strategy.⁵ This plan supports those efforts by promoting enabling infrastructure, but focuses attention on improving mobility choices and safety.

The number of cars in Alexandria is growing, but at a rate that is proportional to population growth

While vehicle ownership is increasing in the city, it is on pace with overall population growth, with vehicles per capita holding steady in the past decade (0.60 cars per capita in 2019).

The percentage of zero-vehicle households has remained relatively steady since 2010 at between 9 and 10% of all households.



U.S. Census Bureau, American Community Survey 1-Year Estimates (2019)

With more new **development near high-quality transit and improved mobility choices**, more people may feel comfortable moving to Alexandria **without a car or with fewer cars per household.**

5. Electric Vehicle Charging Infrastructure Readiness Strategy, 2021 - https://www.alexandriava.gov/uploadedFiles/tes/eco-city/info/Alexandria_EVRS_FINAL.pdf.

Technology Adoption

Advancements in technology are contributing to converging trends in mobility innovation and disruption

In the past decade, adoption of new technologies has led to significant changes in the ways people travel, navigate, and make choices. The result of these trends is an increasing demand for real-time information and on-demand services, prompting the growth of transportation network companies (TNCs) like Uber and Lyft, map-based and navigation mobile applications like Waze, and micromobility services like shared bicycles and scooters. Technology also has enabled our transportation infrastructure to be more connected, responsive, and automated with such innovations as adaptive signal technology that reacts to real-time traffic conditions. Future technology, such as connected and autonomous vehicles, will require the City to prepare, respond, and manage impacts to traffic safety, roadway capacity, and general mobility.

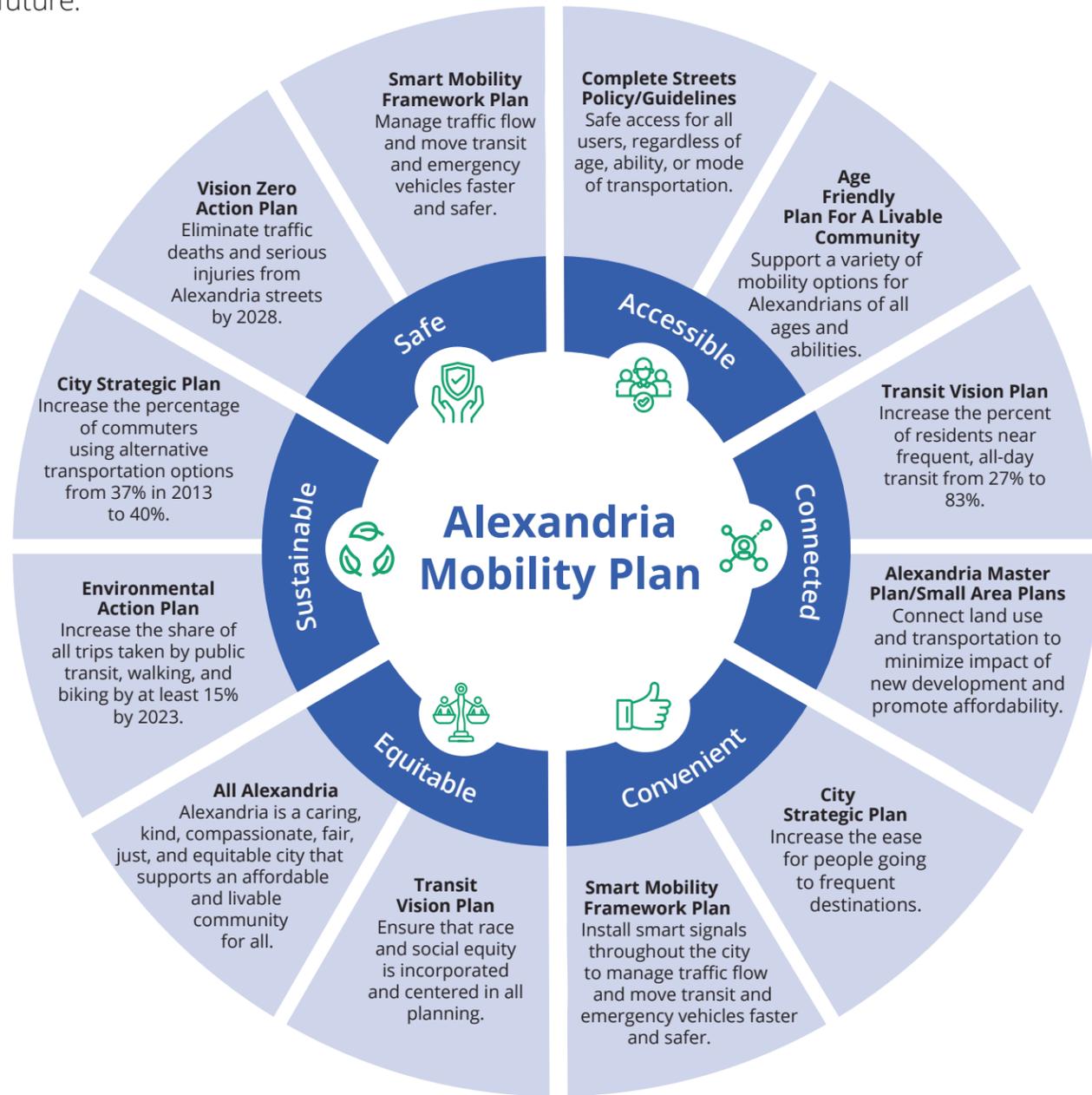
Between 2011 and 2019, the percentage of adults in the U.S. who own a smartphone increased from 35 percent to 81 percent, with 96 percent of Americans owning a cell phone of any kind.⁶

6. Pew Research Center, Mobile Phone Ownership Over Time, <https://www.pewresearch.org/internet/fact-sheet/mobile/#:~:text=The%20share%20of%20Americans%20that,smartphone%20ownership%20conducted%20in%202011.>



Related Plans and Policies

The AMP does not exist in a vacuum. Many City plans, programs, and initiatives that included robust engagement efforts contain transportation-related policies and goals that have been and will continue to be kept at the forefront of AMP implementation and citywide transportation planning, with AMP guiding principles at the core. The policies and strategies developed for this plan have been designed to support and advance these related policies and goals to achieve a cohesive citywide vision for the future.



Note: The plans shown in this example diagram are not an exhaustive list.

Related AMP Chapters

	Transit	Smart Mobility	Streets	Pedestrian and Bicycle	Supporting Travel Options	Curb Space and Parking
City Strategic Plan	✓	✓	✓	✓	✓	✓
ALL Alexandria Resolution	✓	✓	✓	✓	✓	✓
Environmental Action Plan	✓	✓	✓	✓	✓	✓
Alexandria Master Plan and Small Area Plans	✓	✓	✓	✓	✓	✓
Transit Vision Plan	✓					
Complete Streets Policy and Design Guidelines	✓		✓	✓		✓
Smart Mobility Framework Plan	✓	✓	✓			✓
Vision Zero Action Plan	✓	✓	✓	✓		
Housing Master Plan	✓				✓	
Age-Friendly Plan for a Livable Community	✓		✓	✓	✓	✓

The Plan-Making Process

The AMP process began in mid-2019 and occurred over four main phases. Together, this process and the input of the community informed the development of the AMP.

- **Phase I:** Community visioning process to identify desired outcomes and help shape the guiding principles that serve as the foundation for the AMP.
- **Phase II:** Public outreach and engagement activities to get input on what Alexandrians value and want to prioritize in how they travel.
- **Phase III:** Targeted outreach and engagement to develop community-generated ideas for solutions that could achieve the goals of the AMP. Ideas were further refined through community feedback to become policies and strategies.
- **Phase IV:** Community review of the draft plan before finalization and formal adoption.



In addition to overall public engagement activities, the Alexandria Mobility Plan Advisory Committee (AMPAC) provided continuous input to City staff throughout the entirety of the AMP process. AMPAC membership included representation from the Transportation Commission as well as other citywide organizations.

Sentiments heard and lessons learned during the engagement process are included throughout the plan document, and a detailed engagement summary can be found in **Appendix III – Civic Engagement Summary**.

How This Plan Will Be Used

The AMP will be used in a variety of ways to achieve its vision and guiding principles. First and foremost, this plan will serve as a workplan for the City to guide decision-making as it relates to transportation planning and design. With its strong ties to related City plans, targets, and policies, this plan also will help foster productive interdepartmental coordination across City agencies as strategies are advanced.

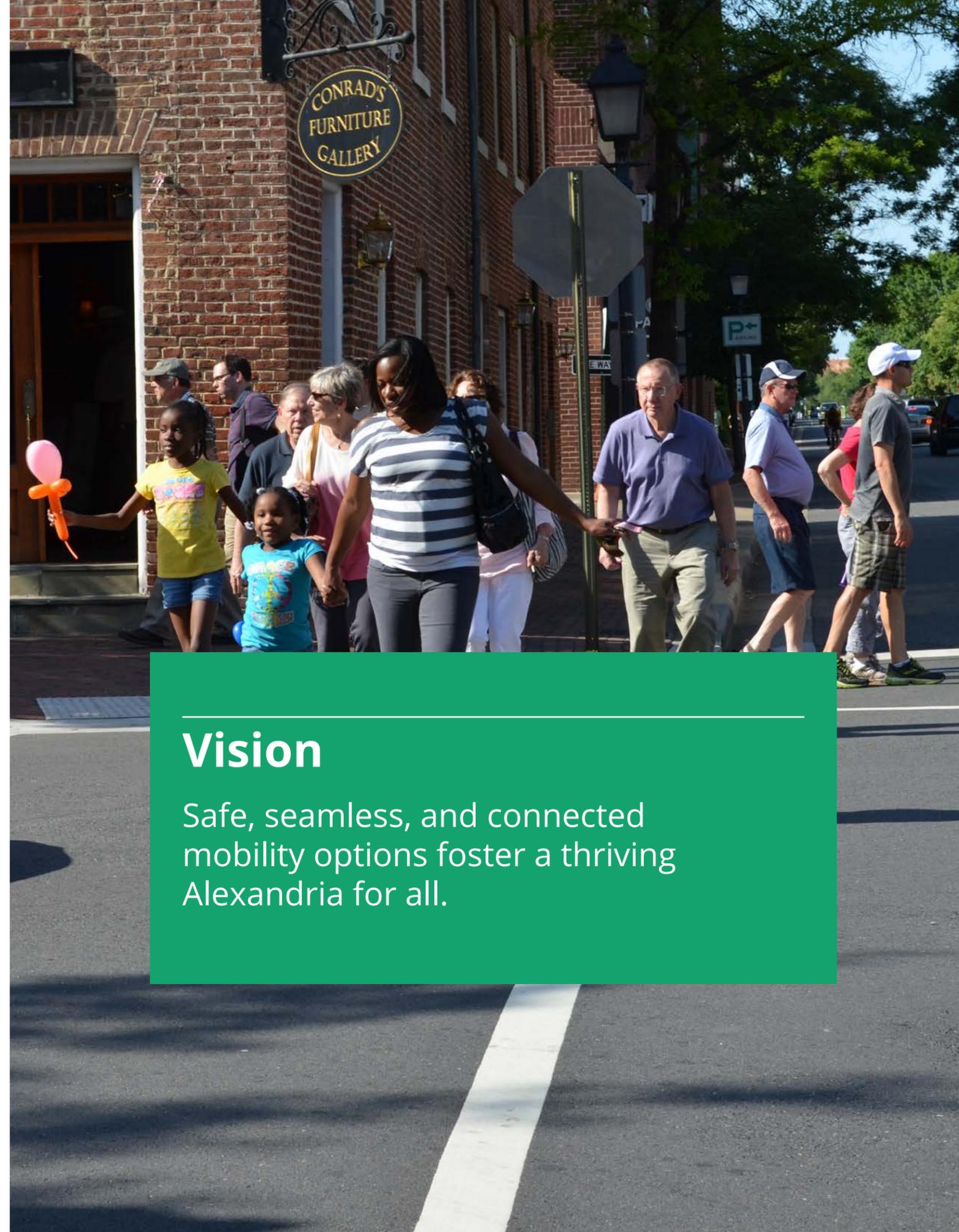
Having a strong planning document also makes Alexandria more competitive for a variety of grants and other funding sources and enables the City to advocate for legislative action at the Commonwealth government level. The purpose of the AMP is not to list all transportation projects for the next 10 years, but to establish policies and guidance that City staff will use to prioritize projects for grant applications. A well-thought-out plan and strong linkages to established guiding principles, policies, and strategies increases the City’s competitiveness in these funding and legislative policy pursuits, which will be critical to advance transportation planning, policies, and strategies.

In keeping with the overarching policy of adaptability and flexibility, it is important to note that the strategies within this plan are not exhaustive. As new initiatives develop, they will be considered compatible with the AMP as long as they are consistent with AMP policies and help to achieve its targets and guiding principles.



Plan Elements

This plan is made up of several key elements that build upon each other.



Vision

Safe, seamless, and connected mobility options foster a thriving Alexandria for all.

Guiding Principles and Measuring Progress

The City will track key performance indicators (KPIs) for each guiding principle through the life of this plan to understand how Alexandria as a whole is faring with regards to the specific outcomes that this plan seeks to achieve. To holistically track outcomes that address the equitable guiding principle, all KPIs are given an “equity lens” to measure progress in a way that is consistent with the City’s ALL Alexandria resolution and ensures equitable outcomes for all Alexandrians, especially neighborhoods and populations that have been historically underserved.

More detail on how the City plans to measure progress toward these principles, as well as chapter-specific metrics, can be found in **Appendix II – Monitoring, Reporting, and Key Performance Indicators.**

Accessible Alexandria will work to make its transportation network easily accessible for users of all ages and abilities.



- **Key Performance Indicator:** Percent of residents in close proximity to alternatives to driving.
- **Equity Lens:** Percent of residents (low income, people of color, seniors, and persons with disabilities) in close proximity to alternatives to driving.

Connected Alexandria’s transportation system will take you where you want to go seamlessly by leveraging technology and integrating transportation and land use.



- **Key Performance Indicator:** Percent of destinations that are connected to alternatives to driving.
- **Equity Lens:** Percent of low-wage jobs, Title 1 schools, and public health clinics that are connected to alternatives to driving.

Convenient Alexandria will provide a transportation system with high-quality mobility options that are reliable, frequent, proximate, and comfortable.



- **Key Performance Indicator:** Percent of residents who say it is easy to get around.
- **Equity Lens:** Percent of residents (low income, people of color, seniors) who say it’s easy to get around.

Equitable

Alexandria acknowledges that there are disparities in neighborhoods and populations in the city that have been historically underserved. Alexandria will be targeted, inclusive, and intentional in addressing gaps in mobility options available, their quality, and safety.



- **Key Performance Indicator:** All guiding principles will be measured for the city both as a whole and with an equity lens that examines how specific communities of greater need are faring with regards to the specific outcomes that this plan seeks to achieve.

Safe

Alexandria will eliminate all traffic deaths and serious injuries by 2028.



- **Key Performance Indicator:** Number of crashes, fatalities, and serious injuries.
- **Equity Lens:** Number of crashes, fatalities, and serious injuries within Equity Emphasis Areas.

Sustainable

Alexandria will prioritize low-carbon mobility options and reduce automobile dependency.



- **Key Performance Indicator:** Vehicle miles traveled and percent of commuters using alternative transportation options.
- **Equity Lens:** Percent of residents (low income, people of color, seniors, and persons with disabilities) in close proximity to alternatives to driving.

Why measure “Proximity to Alternatives to Driving?”

Driving is currently the most used mode of travel in Alexandria because it is often the only reasonable option available. A priority of the AMP is to give people choices. Every home has access to a street, but there are still many Alexandrians without nearby sidewalks, bike lanes and trails, or frequent transit, meaning they do not have the convenient choice to walk, bike, or take transit. Having choices benefits everyone, from cleaner air, healthier lifestyles, and less congestion. Having choices means that when gas prices rise or if there is a transit shutdown, people can still get around safely and conveniently.

Overarching Policies

This plan includes the following overarching policies that will help guide the City's decision-making and implementation efforts across all chapters as it works to advance the vision, guiding principles, and strategies. While the guiding principles are about the outcomes this plan seeks to achieve, these overarching policies speak to core methods for achieving these outcomes.

Apply An Equity Focus To All City Actions

Transportation has historically worked to worsen inequality by physically dividing neighborhoods and through disinvestment in low-income and minority communities. To ensure that transportation decisions in Alexandria not only prevent repeating past mistakes, but are used as a tool to lessen inequality, the City will apply an early and ongoing equity focus to all aspects of City projects, initiatives, programs, and services from conception through implementation. The City will use a framework that ensures policy decisions advance racial and social equity for all Alexandria residents.

Make Our Transportation Network Flexible And Adaptable

The City of Alexandria will strive to accommodate unforeseen external disruptions to our city (such as extreme weather events due to climate change, pandemics, and technological advancements) by building flexibility and resiliency into decision-making. The City will consider such uncertainties at the start of all its projects and identify ways to build in flexibility and adaptability through pilot projects, flexible contract mechanisms, and by prioritizing investments that make sense in a broad array of potential future circumstances.

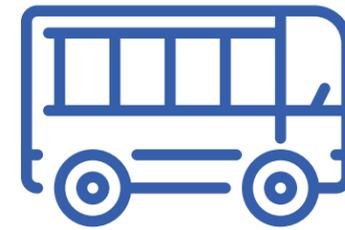
Be Proactive And Data-Driven

The City of Alexandria will be proactive and data-driven in decision-making and when implementing projects and initiatives that advance plans and policies. While community requests and input are an important supplement for decision-making and implementation, time and resources are best—and most equitably—used for proactive decision-making based on data. It also will be important for the City to build and expand its resources and capabilities to process new data sources as they become available into the future.

Develop Partnerships That Advance Shared Goals

The City will develop partnerships with public and private organizations to extend the capabilities of staff and programs to advance shared goals in service of the community. Partnerships of this nature could be formed with regional bodies or neighboring jurisdictions, for example, to foster collaborative data sharing and technology advancement that will improve travel safety, reliability, and mobility for Alexandrians while giving the public more useful tools to make informed travel choices.





Transit

How the City supports improvements to bus, paratransit, and rail services by working to enhance transit options and access.



Introduction

A robust public transportation system is a key ingredient to a successful community mobility strategy. The 2020 **Alexandria Transit Vision Plan** has provided a road map to achieve a future frequent, all-day bus network in Alexandria. This chapter will outline transit-supportive policies and strategies that will help the City achieve the 2030 vision of making bus service more convenient, customer-friendly, reliable, and efficient and will build upon the three transitway corridors established in the **2008 Transportation Master Plan**.

This chapter also considers Metrorail, intercity and commuter rail, and paratransit (transportation for persons who are unable to use traditional bus and rail service) to strengthen critical links between Alexandria and the region.

“

This [2030 proposed] network provides frequent, all-day transit service to 83 percent of people and 81 percent of jobs in Alexandria.

– Alexandria Transit Vision Plan

”



Key Context

 **12**
DASH bus routes, including the King Street Trolley

 **28** Metrobus routes¹ **700+** bus stops **4** Metrorail stations*

*Alexandria's fifth Metrorail station, Potomac Yard, is expected to open in 2022.

 **12,800** average weekday DASH passengers in 2019² **10,100** average weekday Metrobus passengers in 2018²

 **28%**
of Alexandria households use public transit at least once a week³

This is less than in Washington, DC, and Arlington but above average for the region.

 **29%** of low-income residents
and 22%

of minority residents are within walking distance of frequent, all-day transit

89% of low-income residents and **87%** of minority residents will have access to frequent, all-day transit service with full implementation of the Transit Vision Plan.⁴

1, 2. FY2026 DASH Transit Development Plan.
3. 2017-2018 Regional Travel Survey, National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments.
4. Alexandria Transit Vision Plan.

 **17%**
of the Alexandria workforce is employed in sectors such as healthcare, food services, and hospitality⁵

Limited midday, evening, and weekend DASH service means that many workers with non-traditional work hours or who are dependent on transit for other needs must find other options.

 **6**
transit signal priority (TSP) corridors
King Street, Duke Street, Richmond Highway, Seminary Road, Van Dorn Street, and Beauregard Street.⁶

 **3**
High-capacity transitway corridors identified in the 2008 Transportation Master Plan
Route 1 Metroway with bus rapid transit-style service between Alexandria, Arlington, and the new Potomac Yard Metrorail station; West End Transitway; and Duke Street Transitway.

5. U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) 2018. Non-traditional work shift figures include "Accommodation and Food Services" and "Healthcare and Social Assistance" categories.
6. Transit Vehicle Signal Priority & Emergency Vehicle Preemption, City of Alexandria, <https://www.alexandriava.gov/tes/info/default.aspx?id=116073>.

Planned developments such as Inova's new hospital at Landmark and ambulatory care center at Oakville Triangle will bring an influx of off-hour employees and visitors that would benefit from an expansion of frequent, all-day transit service.

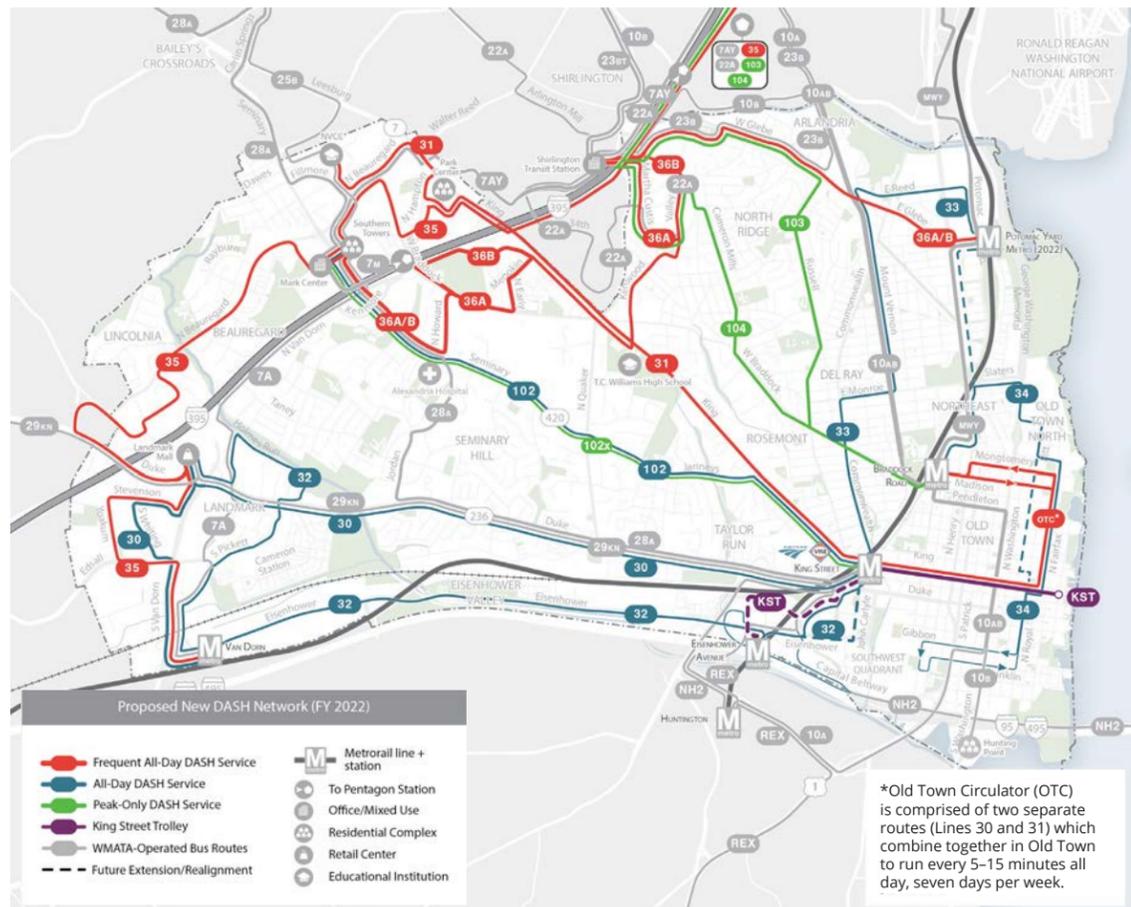




Existing Programs, Policies, and Initiatives

DASH Bus System

The Alexandria Transit Company (DASH) operates bus service on 11 routes and the King Street Trolley. DASH's service area covers approximately 15 square miles and generally aligns with the jurisdictional boundaries of the City of Alexandria, with select routes providing service along I-395 to the Pentagon during weekday peak hours. The system's design follows a modified hub-and-spoke network design model with Old Town as the "hub," and the major east-west arterials (King Street, Seminary Road, Duke Street, and Eisenhower Avenue) as the "spokes." Several crosstown routes also provide connections between destinations in the West End and northern Alexandria. The map below shows what is proposed for the New DASH Network starting in September 2021.



7. www.dashbus.com/newnetwork.

DOT Paratransit

DOT is the City of Alexandria's specialized, Americans with Disabilities (ADA)-compliant transportation service for Alexandria residents and visitors who are unable or find it difficult to use transit buses or rail.

Discounted Fare Programs

Previously, DASH buses were free for persons with disabilities through the DOT and MetroAccess programs and for all middle school and high school students. As of September 2021, DASH bus service is fare-free for all people using the bus in Alexandria.

Regional Coordination

Through the Northern Virginia Transportation Commission, the Washington Metropolitan Area Transit Authority (WMATA) Board, the Virginia Railway Express (VRE) Operations Board, and the Northern Virginia Transportation Authority, City officials and staff work with neighboring jurisdictions to coordinate and ensure that regional transportation needs are met. Alexandria and DASH staff coordinate with regional partners on topics such as regional corridor studies, seamless transit payments, and communication about regional service changes.





Policies

The Transit chapter policies will guide the City's decision-making around investments that will enhance ease of use, improve customer-friendliness, and increase ridership of DASH and WMATA transit services.

Policy A: Make transit greener and more useful

Build out a fast and reliable all-day transit network with frequent service that runs on electric buses and serves the entire city, with a focus on areas that will benefit the most Alexandrians, businesses, employees, customers, and visitors.

Per the Transit Vision Plan, the City is prioritizing route improvements in areas that will generate more ridership and better serve transit-dependent populations. The City will continue to prioritize service enhancements and initiatives in these areas, while ensuring that there are transit options citywide.

Policy B: Make transit easier to use

Increase transportation choices by reducing or eliminating barriers to taking transit.

To increase transit ridership, the City of Alexandria will be proactive and intentional in working to make transit simpler, less expensive, and more convenient.

The City of Alexandria and DASH are in the process of analyzing the use of electric buses and have **committed to having a 100% zero-emissions fleet.** Recently, DASH has made significant progress towards electrification and was awarded \$5.1 million for the purchase of six battery-electric buses and associated charging infrastructure in 2019, which have been placed into service. Additional improvements and upgrades at the DASH facility will continue to support the operation of the new electric buses and advancement towards full electrification.

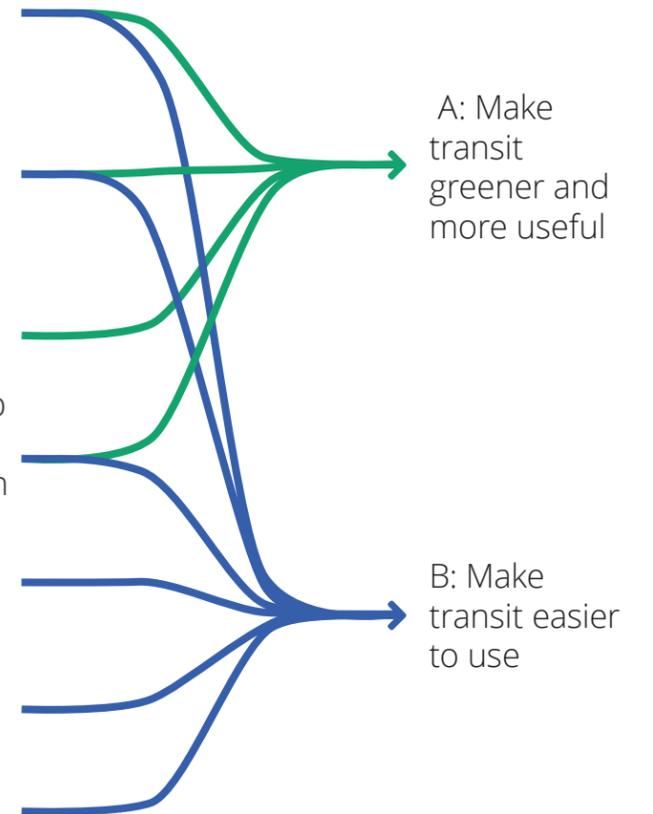
Strategies

That support policies

1. Implement a citywide transit network with frequent, all-day service
2. Build out the city's priority transitway corridors and identify improvements on congested, high-ridership corridors to reduce travel times and improve reliability
3. Transition the City's bus fleet to fully electric, zero-emission vehicles
4. Improve the rider experience from trip planning, to accessing the stop, riding the bus, and arriving at the destination
5. Evaluate DASH's fare free service and continue to explore low-income WMATA fares
6. Support a better-connected regional transit network
7. Modernize the paratransit program for the city's aging population

Policies

The City of Alexandria will...





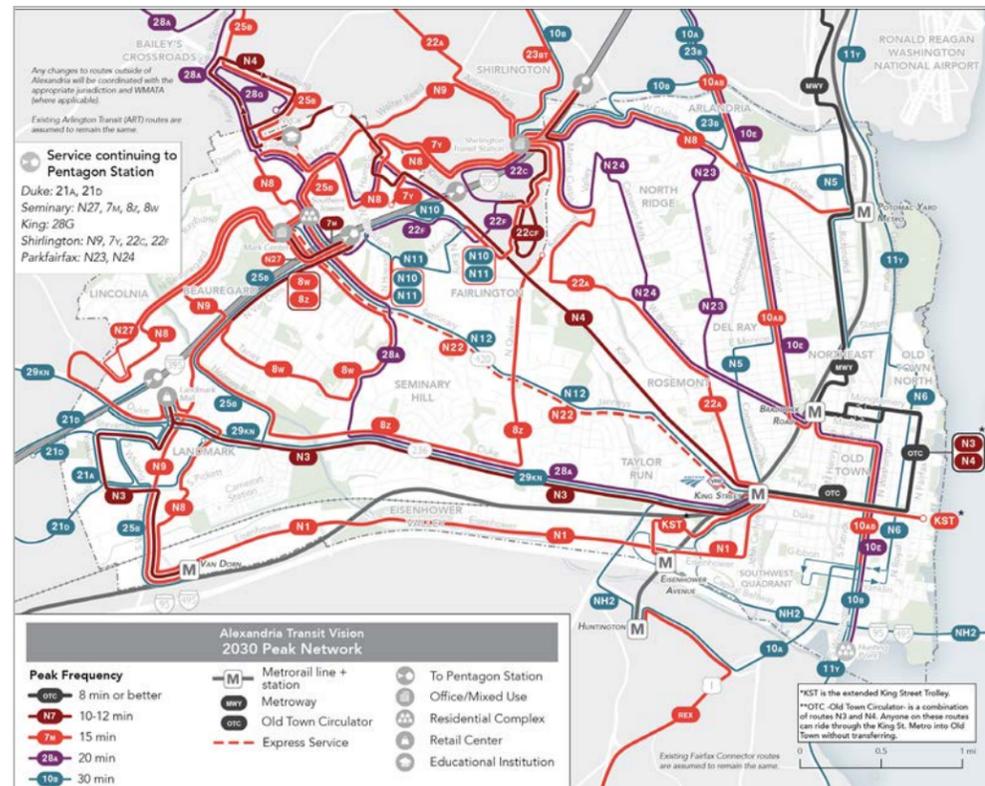
Strategies

Strategy 1. Implement a citywide transit network with frequent, all-day service

Actions

- Begin implementing the New DASH Network⁸ in Fiscal Year 2022
- Work with DASH's Advisory Committee and other members of the community to regularly gain input about service changes and implementation
- Seek funding for both the operations and capital improvements necessary to incrementally implement the 2030 network and improvements recommended in the Transit Vision Plan

2030 Peak Transit Network



8. www.dashbus.com/newnetwork.

Addressing the Need

To make the system more useful for everyone and to have the greatest likelihood to increase ridership, a more frequent, all-day network will be important.

Service during off-peak hours and weekends can be limited and present a barrier to those choosing to or needing to use transit to access jobs and opportunities.

Advancing City Plans and Goals

Alexandria Transit Vision Plan

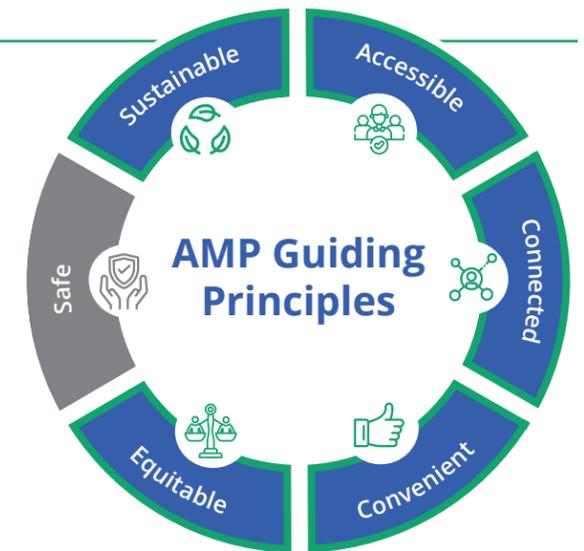
- 2030 Vision Plan Network

Environmental Action Plan 2040

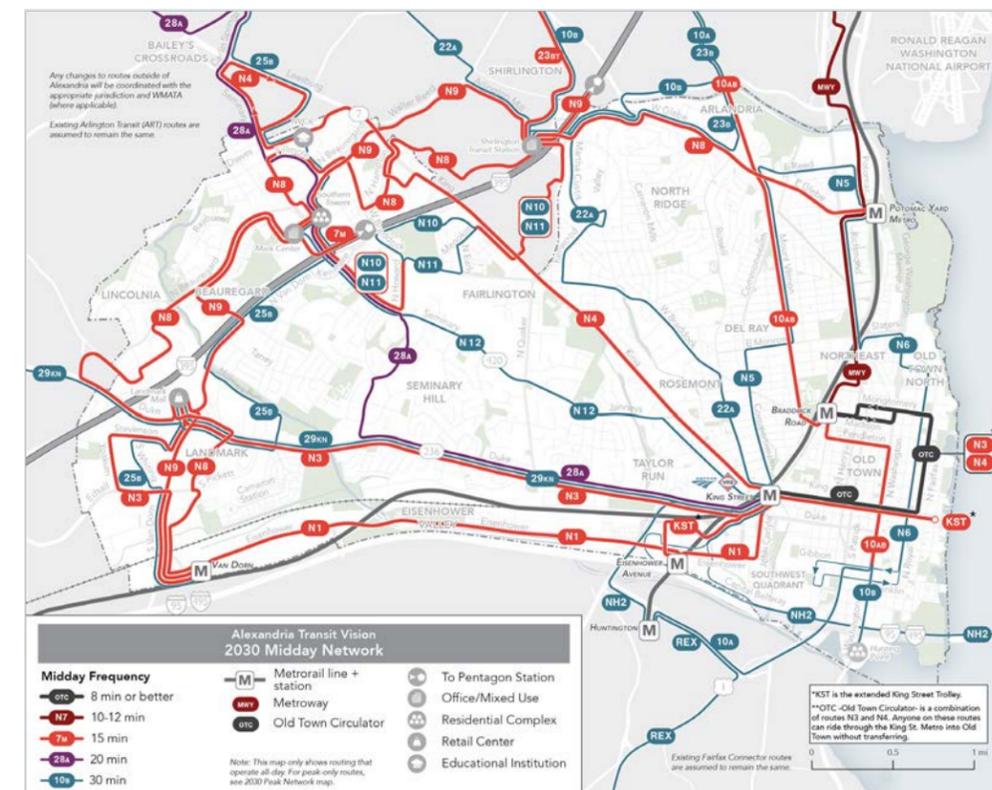
- Improve and Expand Low Carbon Options such as Transit, Bikes, and Walking

City Strategic Plan

- Multimodal Component and Goals



2030 Midday Transit Network





Strategy 2. Build out the city's priority transitway corridors and identify improvements on congested, high-ridership corridors to reduce travel times and improve reliability

Actions

- Collaborate with the community to develop a design for Duke Street that informs the construction of the Duke Street Transitway
- Advance the design and construction of the West End Transitway and evaluate its success to determine whether dedicated lanes or other methods to improve speed and reliability are needed
- Explore connecting Alexandria's transitways with high-capacity transit corridors in Fairfax County to help create a more reliable and efficient regional bus network
- Extend the dedicated infrastructure for the Route 1 Metroway corridor to connect to the new Potomac Yard Metrorail station and into Arlington
- Evaluate transit signal priority, queue jumps, high-occupancy vehicle lanes, and other operational or street design improvements/pilot projects on corridors with frequent and congested bus service

A transitway (also known as a busway or bus rapid transit) is a high-quality bus-based transit system that delivers **fast, frequent, comfortable, and cost-effective service**. With dedicated lanes or preferential treatment on streets, a transitway can contain features similar to a light rail or metro system with greater reliability and speed, avoiding traffic-related delays that typically slow down regular bus service.



Addressing the Need

The City is planning for future growth around the urban edges of Alexandria, which will increase demand for high-quality, high-capacity transit.

Alexandria has made progress on the three transitway corridors, but there is still work to be done.

Many people do not use the current transit system because it is often slow and unreliable.

Those who take the bus reduce the number of vehicles on the roadway, yet are stuck in the same traffic as everyone else; unlike Metrorail, which operates in its own right-of-way.



Advancing City Plans and Goals

Alexandria Transit Vision Plan

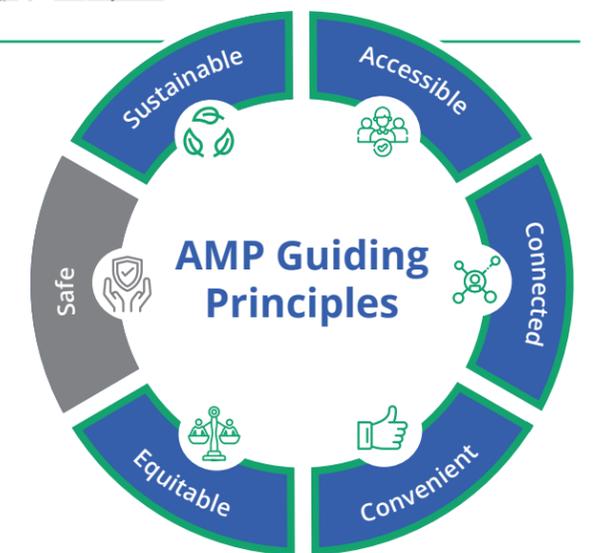
- 2030 Vision Plan Network

Environmental Action Plan 2040

- Improve and Expand Low Carbon Options such as Transit, Bikes, and Walking

City Strategic Plan

- Multimodal Component and Goals





Strategy 3. Transition the City's bus fleet to fully electric, zero-emission vehicles

Actions

- Move forward with the recommendations outlined in the DASH Zero-Emission Bus Implementation Plan to continue the transition of the City's fleet to all electric
- Make DASH an eligible direct federal grant recipient to broaden the available funding for the transition to zero-emissions buses
- Monitor emerging technology benefits and tradeoffs



Addressing the Need

Transportation is the second-largest source of greenhouse gas (GHG) emissions in the region.

The City Council has declared a climate emergency and efforts like these will help support resiliency.

The City has a goal of reducing GHG emissions 50% by 2030 and 100% by 2050.

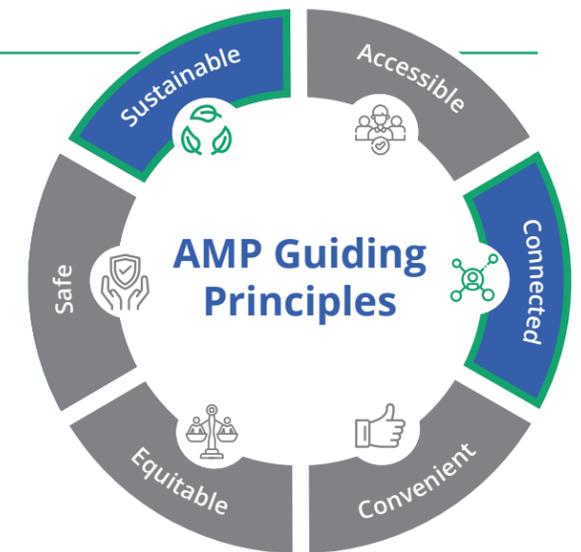
Advancing City Plans and Goals

Alexandria Transit Vision Plan

- 2030 Vision Plan Network

Environmental Action Plan 2040

- Improve and Expand Alexandria's Public Transit System



In 2021, DASH received **six battery-electric buses and fast chargers** through the Volkswagen Environmental Mitigation Trust, as well as statewide transit capital funding to test the technology. DASH also has secured grant funding for **20 additional electric buses** and to **expand and upgrade its facility** to accommodate this new fleet of electric buses by 2025.



Strategy 4. Improve the rider experience from trip planning, to accessing the stop, riding the bus, and arriving at the destination

Actions

- Upgrade the existing fleet and change fleet specifications on future bus orders to improve the health, safety, and comfort of drivers and passengers during the COVID-19 pandemic and beyond, including driver partitions, air flow improvements, and real-time rider notifications of bus crowding levels
- Build in options for storage of large items such as strollers or groceries and enact rider policies to encourage families to use transit
- Promote real-time tracking and bus priority technology to enable easier and more reliable trip planning and vehicle tracking for customers
- Ensure all bus stops are fully accessible per the Americans with Disabilities Act (ADA) and consider opportunities to improve access to bus stops through improving sidewalk, bicycle, and ramp connections
- Expand implementation of bus stop amenities including shelters, real-time signage, seating, lighting, and natural amenities to improve comfort and safety



Addressing the Need

The opportunity exists to enhance the transit journey—not just while riding, but during route planning, waiting at bus stops, and transferring between routes.

As indicated during Alexandria Mobility Plan focus group meetings, **integrated mobile applications** and/or signs with **real-time information** are in high demand and would give users confidence in opting for transit.

Traveling to and waiting at bus stops is often expressed as a concern, especially among elderly and female riders. Greater investment in bus stop amenities such as shelters and lighting—including sidewalks and bike lanes that connect to bus stops—will help improve the transit journey for existing and future transit riders.⁹

Advancing City Plans and Goals

Alexandria Transit Vision Plan

- Capital Improvements, Bus Replacement, and Fleet Expansion

Environmental Action Plan 2040

- Improve and Expand Alexandria’s Public Transit System

Smart Mobility Framework Plan

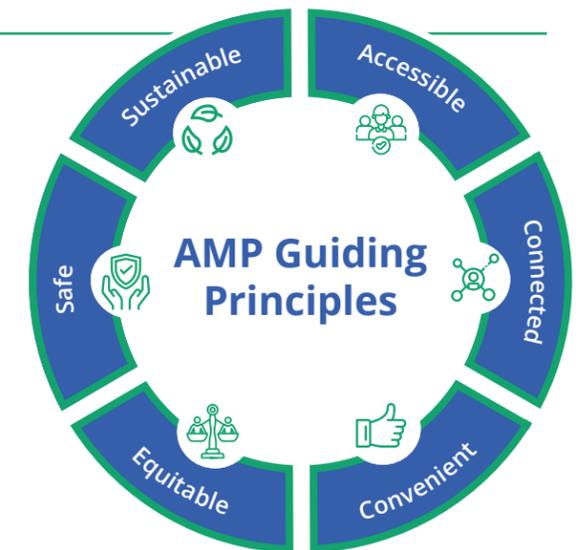
- Install Information Displays at Bus Stops

Age Friendly Plan For A Livable Community

- Provide Safe, Reliable, and Frequent Transit

Complete Streets Policy and Design Guidelines

Vision Zero Action Plan



9. Who’s on Board: How to Win Back America’s Transit Riders, TransitCenter, 2019.

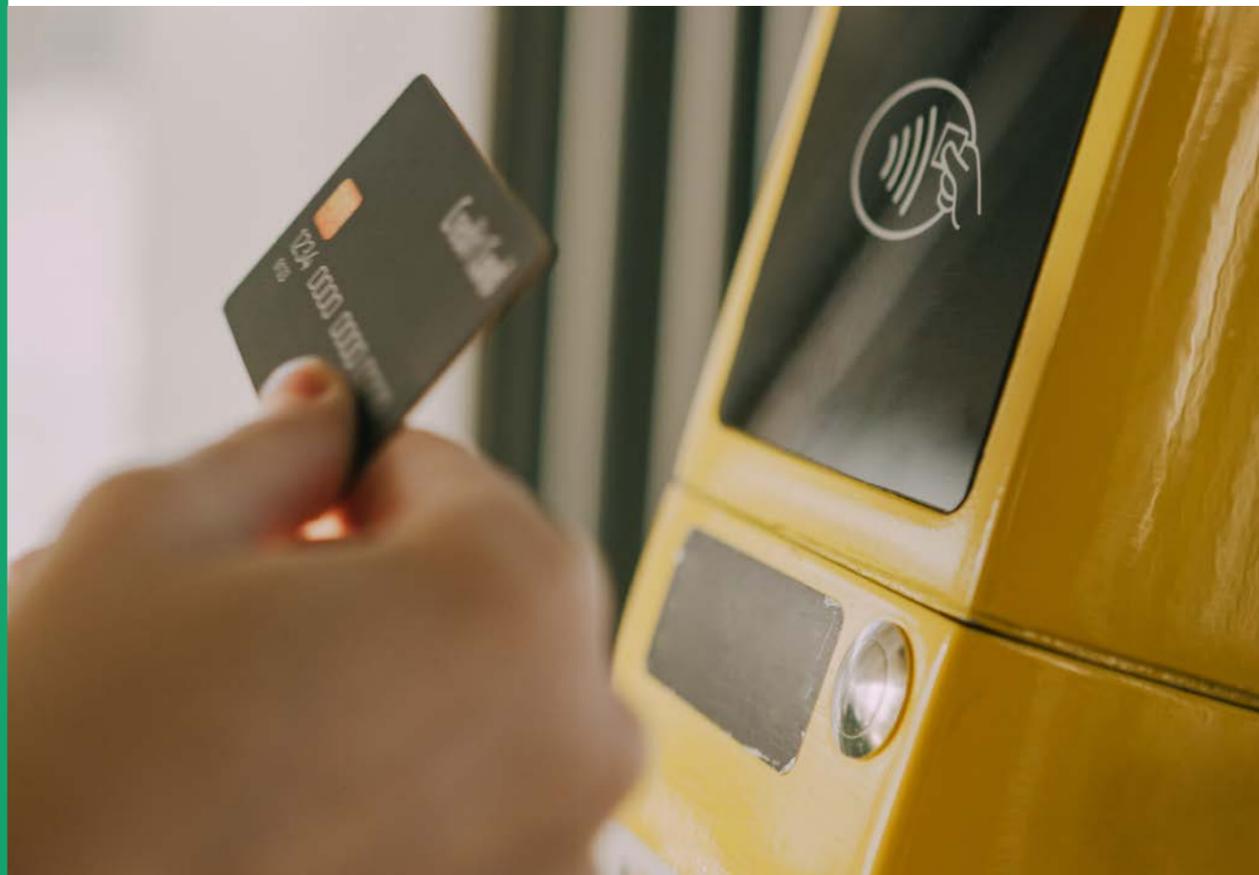


Strategy 5. Evaluate DASH’s fare free service and continue to explore low-income WMATA fares

Actions

- Monitor outcomes of implementing free fares on DASH
- Identify funding sources for long-term sustainability of a DASH fare free program
- Explore low-income fare products for WMATA services

The **Transit Ridership Incentive Program**—managed by the Virginia Department of Rail and Public Transportation—is a new statewide grant program dedicated to **improving transit’s regional connectivity** in urban areas with a population in excess of 100,000 and **reducing barriers to transit** use by supporting low-income and zero-fare programming.



Addressing the Need

For some, fares present a financial obstacle to using transit. For example, more than 30 percent of Alexandria Metrobus riders have an annual household income of less than \$30,000.¹⁰ This obstacle makes it more expensive to access regional jobs and services.

A 2020 grant from the Metropolitan Washington Council of Governments to analyze different fare structures that benefit low-income riders has informed the City’s plans for changes to fare structure.

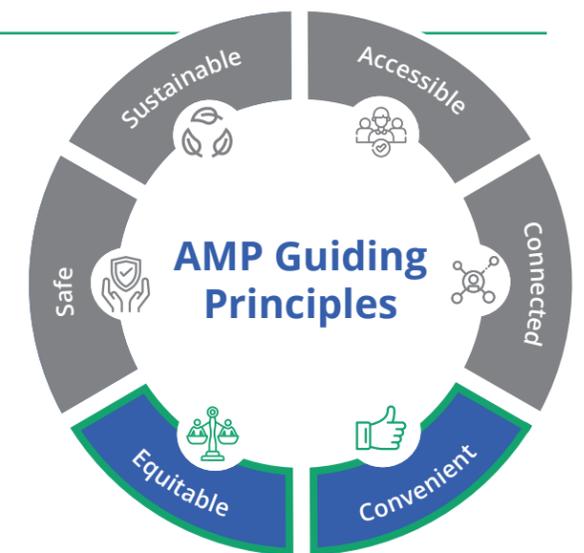
Advancing City Plans and Goals

Alexandria Transit Vision Plan

- Increasing Transit Access for Low-Income Alexandrians

Environmental Action Plan 2040

- Improve and Expand Alexandria’s Public Transit System



10. Metrobus Ridership Survey, 2018.



Strategy 6. Support a better connected regional transit network

Actions

- Support the development of mobile payment and trip planning applications that are compatible between Washington Metropolitan Area Transit Authority (WMATA), Virginia Railway Express (VRE), Maryland Area Rapid Commuter (MARC), and Alexandria Transit Company (DASH) services
- Collaborate with WMATA and neighboring jurisdictions to enhance connectivity to major activity centers and develop a more coordinated, useful regional transit system as part of WMATA's Bus Transformation Project implementation and Bus Network Redesign
- Enhance connections to support future rail expansion, water transportation expansion, and future regional bus rapid transit corridors

Several ongoing initiatives are examining the possibility of making **expanded commuter and intercity rail options** a reality in the future. The realization of “regional” or “through-running” rail (i.e., trains from Virginia that travel to Maryland without requiring a transfer at Washington Union Station and vice versa) holds the potential to better connect Virginia with Washington, DC, Maryland, and beyond, **unlocking new access to jobs and opportunities across the region.**



Credit: Virginia Railway Express

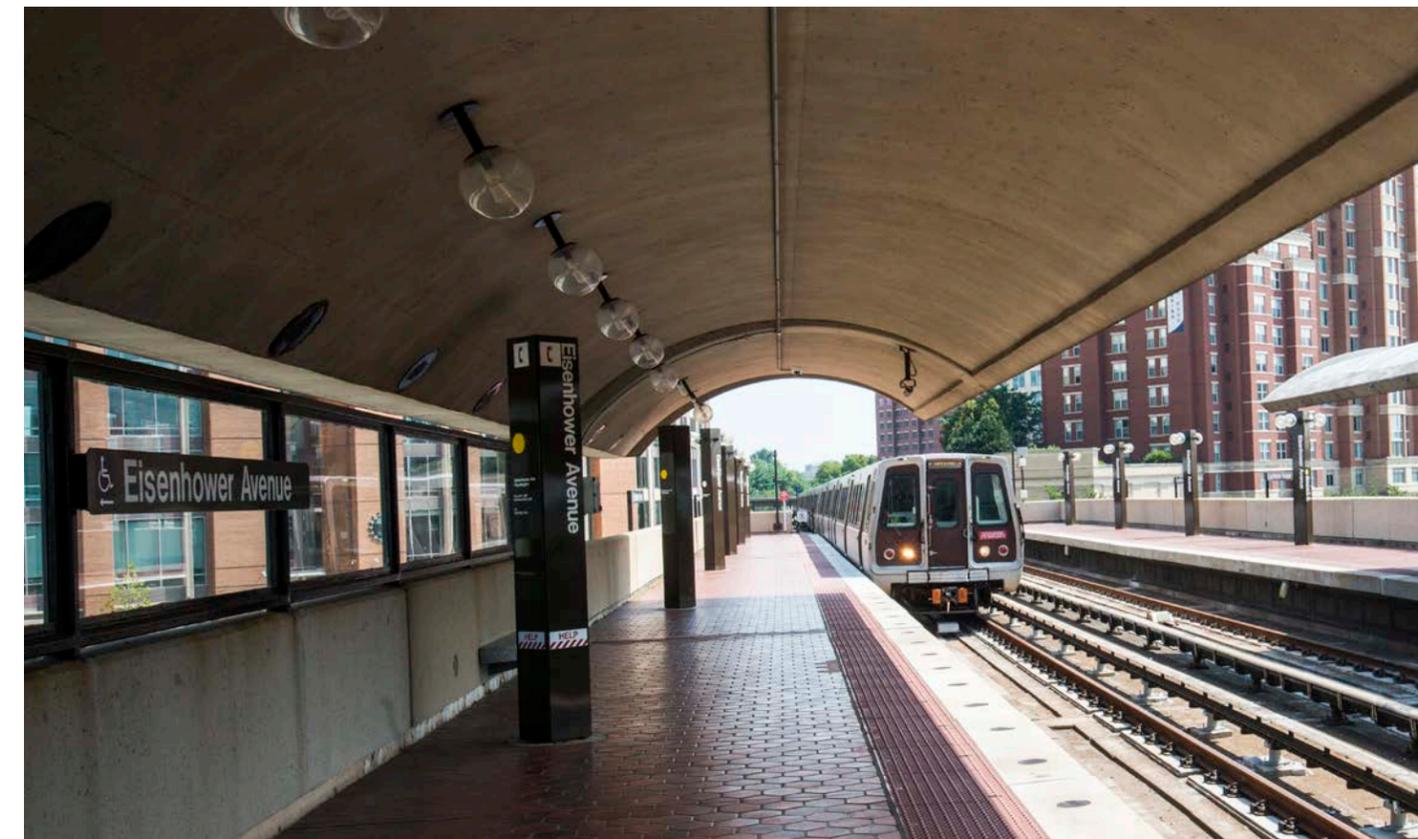
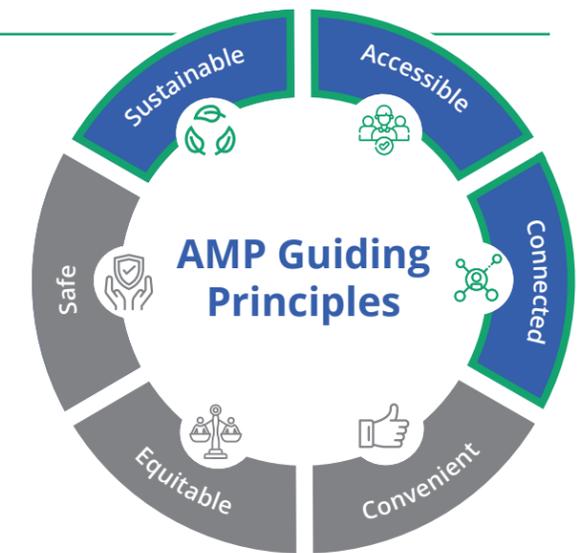
Addressing the Need

Demand for travel is not restricted to individual city, county, or state boundaries, especially in the Washington metropolitan region. A better-connected regional transit network will meet the need of travelers to get to more destinations across the region in a seamless, efficient, and convenient manner.

Advancing City Plans and Goals

Environmental Action Plan 2040

- Improve and Expand Alexandria's Public Transit System





Strategy 7. Modernize the paratransit program for the city's aging population

Actions

- Develop more customer-friendly service that is scalable for increased demand
- Identify opportunities to improve cost-effectiveness for long-term program management for DOT Paratransit and MetroAccess services
- Explore partnerships with existing City services, neighboring jurisdictions, and on-demand service providers to improve the effectiveness and efficiency of serving the travel needs of seniors and persons with disabilities



Addressing the Need

Paratransit programs have not changed considerably over the last 10 years.

These programs are costly and will only get more expensive as the number of elderly and disabled residents are anticipated to increase.

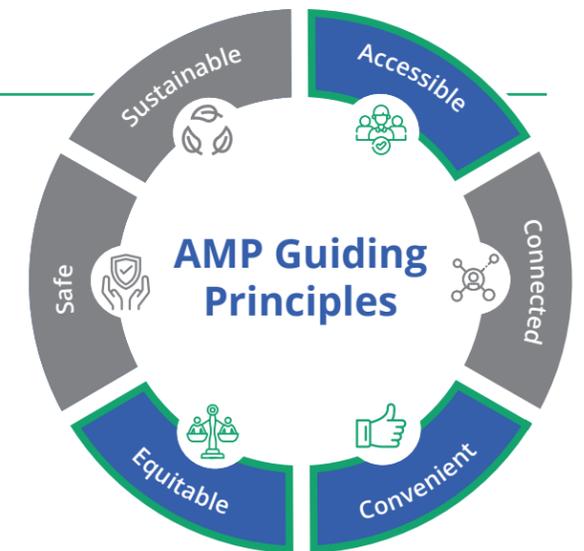
There are opportunities to make the programs more efficient while improving the customer experience.

Paratransit provides transportation services under the ADA to individuals with disabilities that prevent them from being able to use traditional transit routes or vehicles. DOT is the City of Alexandria's specialized paratransit program that provides services to qualified passengers to help them get where they need to go. In an average month, the City's DOT paratransit program provides about 5,500 rides.

Advancing City Plans and Goals

Age Friendly Plan For A Livable Community

- Provide Safe, Reliable, and Frequent Transit
- Communication About Programs and Services Available to Older Alexandrians and Adults with Disabilities



Metrics

The strategies and policies in this chapter are intended to move the needle on the following measurable metrics. Additional details on metrics, including applicable targets for future years, can be found in **Appendix II - Monitoring, Reporting, and Key Performance Indicators**.

Metric

Percent of residents within ¼ mile of 15 minute or better service
(All residents and low-income, people of color, and senior residents)

Percent of people taking transit to work (mode share)

Positive rating of ease of travel by public transportation (Resident Survey) *

Percent of bus stops with shelters

Percent of bus stops that are accessible for persons with disabilities

* The Alexandria Resident Survey reports results based on race/ethnicity, income, and age in addition to all residents.





Smart Mobility

How the City incorporates technology into the transportation system to better manage traffic.



Introduction

Smart mobility is a broad term that incorporates the application of technology to streets, traffic signals, vehicles, parking systems, and other transportation infrastructure to make them more efficient and safe, while providing data that can help improve long-term decision-making about where and what changes to make to our streets. In the coming decade, converging innovations and technology are likely to play a transformative role in transportation. Given the limited ability to expand the street network, smart mobility initiatives will be instrumental in improving traffic flow. Alexandria's 2018 **Smart Mobility Framework Plan** describes a range of efforts that the City is taking to prepare for and incorporate technology into its transportation assets. Through these efforts, the City is working to lay the groundwork for future technology that will help better manage traffic on local streets.

Key Context



250+

traffic signals

200 of which are 'connected' for central monitoring and control.¹



5

corridors with transit signal priority (TSP) and emergency vehicle preemption (EVP) installed

TSP and EVP allows vehicles such as buses, fire trucks, and other emergency vehicles to get through traffic signals quicker, keeping buses on schedule and improving response times for emergency vehicles.²



1. Smart Mobility Framework Plan, 2018, <https://www.alexandriava.gov/uploadedFiles/tes/info/Smart%20Mobility%20Framework.pdf>.

2. Smart Mobility, City of Alexandria, <https://www.alexandriava.gov/SmartMobility.html>.



Existing Programs, Policies, and Initiatives

Smart Mobility Program

Alexandria's Smart Mobility program represents an investment in the future of transportation. The City is actively creating infrastructure for future advancements, such as autonomous and connected vehicles, which will make traveling by car, bus, bike, and foot faster, more efficient, and safer than ever. While the City is laying the foundation for innovations that may be 20 years into the future, some are just 5 to 10 years away—and some, such as real-time travel information collection and technologies that help emergency vehicles reach people faster and buses stay on schedule, are already in place. To date, the City has installed more than 145,000 feet of fiber-optic cable, 27 traffic cameras, and 30 smart traffic sensors. These investments ensure that Alexandria is at the forefront of a global movement to make cities as connected, innovative, and smart as possible.



Fiber-Optic Cable

The laying of fiber-optic cable is a key initiative of the City's intelligent transportation system (ITS) initiative. The resulting fiber-optics network will become a conduit of real-time communications—linking traffic signals, weather stations, and other devices with the Traffic Management Center. These updates will allow the City to better manage and respond to delays and incidents, plan for special events, share critical alerts and data to better inform the public, and support new mobility technologies as they come online.

Passive Optical Networks

The City of Alexandria recently conducted a pilot project using Passive Optical Networks (PON) for traffic signal control. PON is a technology developed by cable companies to connect fiber-optic networks to homes and is much less expensive and easier to maintain than traditional signal control technology. The PON pilot was a success, and the City is deploying this technology through its ITS Integration Phase III and IV projects. Alexandria is one of the first municipalities in the country to use this technology.





Policies

The Smart Mobility chapter policies will guide the City's decision-making around technology improvements that will make streets safer, more efficient, and prepared for the future.

Policy A: Improve safety and efficiency

Use technology to manage congestion for safe and efficient city streets and protect the character of neighborhoods.

In the past, cities have relied on physical infrastructure such as pavement markings, curbs, and signage to manage their transportation networks. As transportation moves into a new digital age, it is critical to incorporate technology and data into management practices. The City of Alexandria will apply technology to its streets, traffic signals, transit vehicles, and other transportation infrastructure to help make the best and most efficient use of our streets.

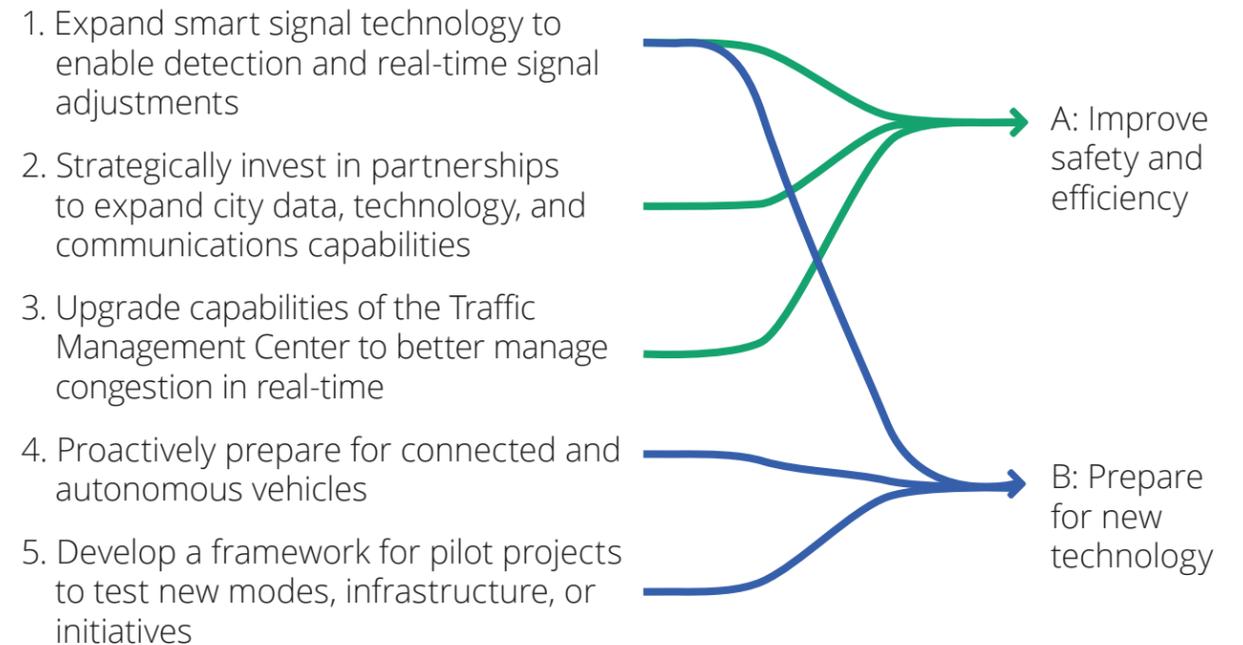
Policy B: Prepare for new technology

Plan proactively and flexibly to ensure cost-effective investment in technology that can improve travel choices.

By taking a forward-looking approach, the City of Alexandria will position itself to keep pace with rapidly advancing technology and lay the groundwork for integrating future technologies. Planning flexibly will enable the City to adapt to the latest technologies as they continue to evolve.

Strategies

That support policies



Policies

The City of Alexandria will...

Managing Congestion: A Multifaceted Approach

The policies and strategies outlined in this chapter are part of a **multifaceted approach to addressing the challenge of congestion management in Alexandria**. While all strategies aimed at increasing options—particularly transit—can have a positive impact on congestion, strategies from other chapters that directly aim to reduce and manage traffic include:

- Develop a comprehensive program to reduce speeding and cut-through traffic on local streets (Streets Chapter)
- Ensure new development minimizes negative impacts to the street network (Streets Chapter)
- Work with regional, state, and private sector partners to develop tools to keep traffic on highways and reduce regional cut-through traffic (Streets Chapter)
- Pursue regional approaches to reduce traffic and congestion, particularly during peak times (Supporting Travel Options Chapter)



Strategies

Strategy 1. Expand smart signal technology to enable detection and real-time signal adjustments

Actions

- Integrate transit signal priority (TSP) and emergency vehicle preemption (EVP) into more of the City's corridors. This involves upgrading the City's traffic signals as well as the fleet of transit and emergency vehicles with preemption equipment
- Enable the use of vehicle detection at signals for more responsive timing through adaptive signal technology. Duke Street and Van Dorn Street will be the first two corridors to be prioritized for this effort
- Improve data collection through new platforms and technologies to better understand how people use the transportation system and improve decision-making



Addressing the Need

By installing signal technology that can respond and adapt to real-time vehicle location and movement data, the City can meet the need to manage traffic flow and move more people, transit, and emergency vehicles faster and safer while avoiding costly changes to the roadway network.

The City's **Adaptive Traffic Signal Control project** aims to install smart detection equipment on traffic signals to respond to real-time conditions. This effort will optimize traffic flow, decrease delays, and reduce stops at intersections to help traffic move better on arterial streets and reduce traffic on local streets .

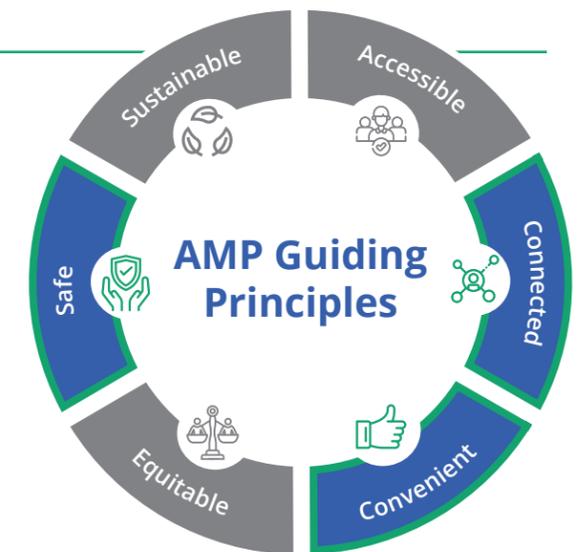
Advancing City Plans and Goals

Smart Mobility Framework Plan

- Install Intelligent/Adaptive and Traffic Responsive Traffic Signal Systems and Install TSP and EVP Equipment on Signals
- Install TSP and EVP Equipment on Buses and Fleet Vehicle

Vision Zero Action Plan

- Improve Data Collection and Evaluation





Strategy 2. Strategically invest in partnerships to expand city data, technology, and communications capabilities

Actions

- Develop a template for evaluating partnership opportunities and coordinating with neighboring jurisdictions, state agencies, and private companies to improve regional collaboration and safe, protected, and transparent data sharing
- Identify potential partnerships to improve information and communication about parking availability, gain a better understanding of how the curb space on City streets is being utilized, obtain anonymized travel pattern data from private mobility operators, and collect and analyze real-time data to inform traffic management and street design
- Utilize platforms and engage in regional coalitions to make transportation data more transparent and improve decision-making

Alexandria has joined the [WAZE for Cities Program](#), providing the City access to **real-time information** on incidents and slow-downs and providing drivers access to **advance notice on construction, crashes, and road closures**.



Addressing the Need

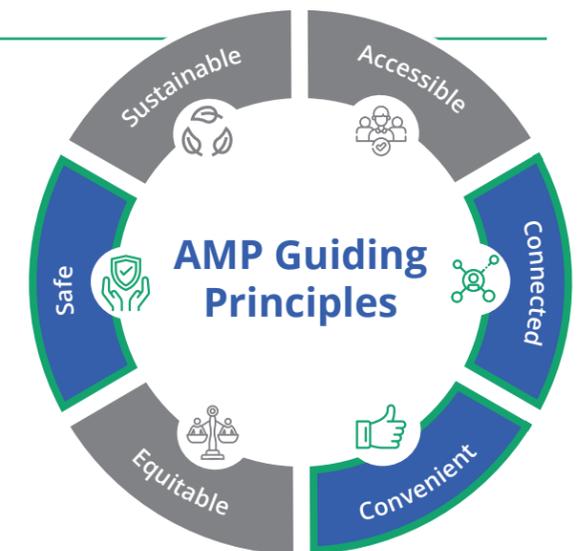
Partners are often needed to help expand a city's data, technology, and communications capabilities. The key to effective partnerships is to assess how transportation needs align across partners and identify specific opportunities for addressing shared goals that benefit all parties. Potential partners can include non-profits, schools or other institutions, nearby jurisdictions, regional bodies, or private companies. Bringing parties to the table that have similar needs or a different perspective can be beneficial in solving problems.

There is an increasingly large amount of data that can be generated from public-private partnerships. Processing and understanding this data requires a shift in thinking, more data analytics capabilities and resources, and increased collaboration.

Advancing City Plans and Goals

Smart Mobility Framework Plan

- Facilitate Data Exchange and Integrate Real-Time Data into Decision-Making Model



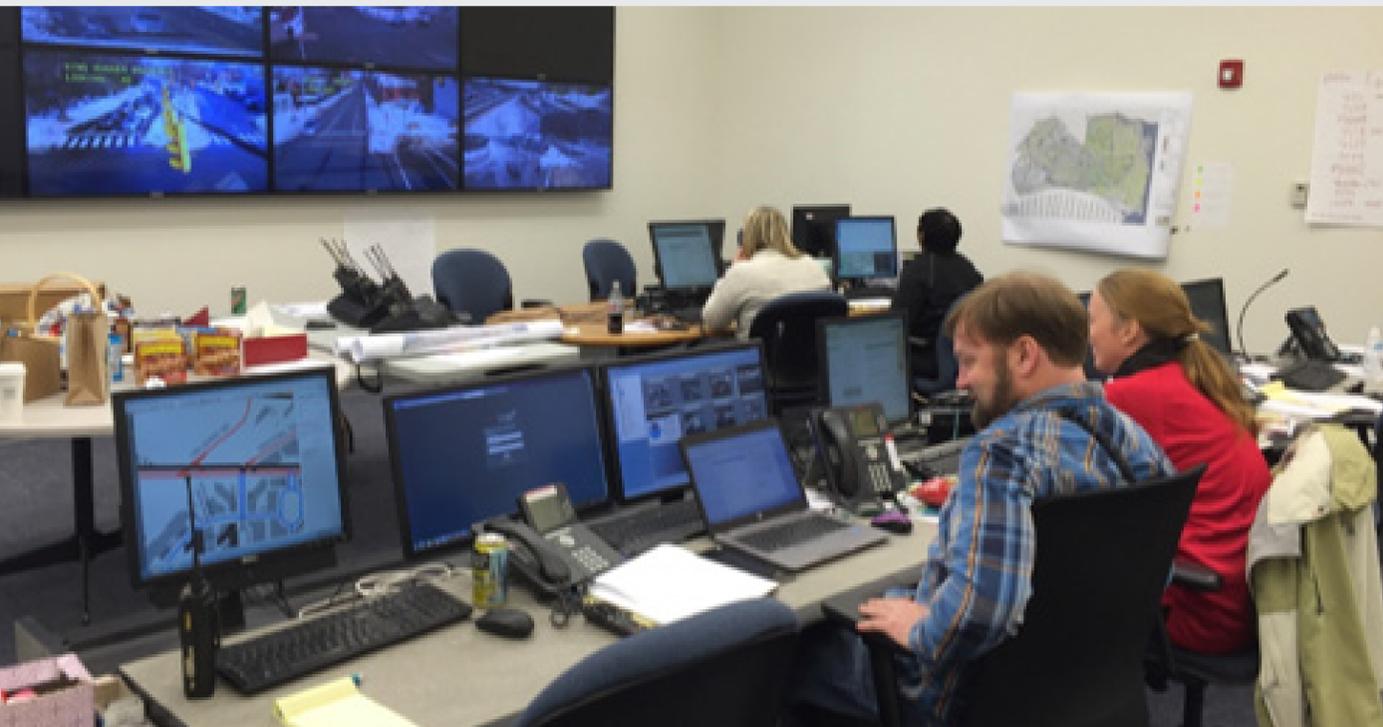
One of the key considerations when gathering and sharing data with private partners is how to ensure the **transparency and privacy** of data sharing processes. People want to know what information about them is being tracked and how it is being used. Keeping data anonymous, developing data management plans and procedures with partners prior to beginning any program, and being clear and deliberate to the user of how their information may or may not be used will benefit all parties involved.



Strategy 3. Upgrade capabilities of the Traffic Management Center to better manage congestion in real-time

Actions

- Equip Alexandria’s Traffic Management Center (TMC) to allow it to manage on-street traffic equipment, monitor overall system status including pavement condition during weather events, configure devices remotely, and analyze data
- Expand coverage of closed-circuit television (CCTV) cameras and improve traffic visualizations for more efficient management of traffic incidents
- Incorporate resiliency and redundancy measures, such as a virtual backups in the event of failures



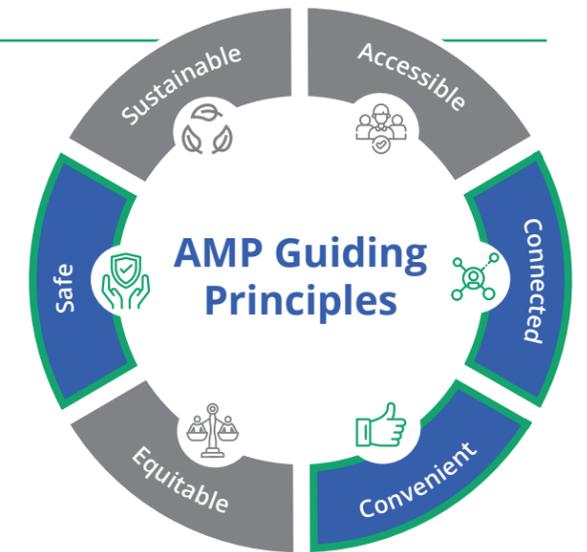
Addressing the Need

As Alexandria grows and technology changes, the TMC will require greater capabilities to control signal timing and phasing, dispatch and track City vehicles, and monitor real-time conditions and incidents. These increased capabilities will allow the City to better manage and respond to delays and incidents, plan for special events, share critical alerts and data to better inform the public, and support new mobility technologies as they come online.

Advancing City Plans and Goals

Smart Mobility Framework Plan

- Upgrade TMC, Facilitate Data Exchange, and Create Automated Interactive Maps
- Increase Coverage of CCTV
- Expand Network of Weather Sensor Stations / Pavement Sensor Technology

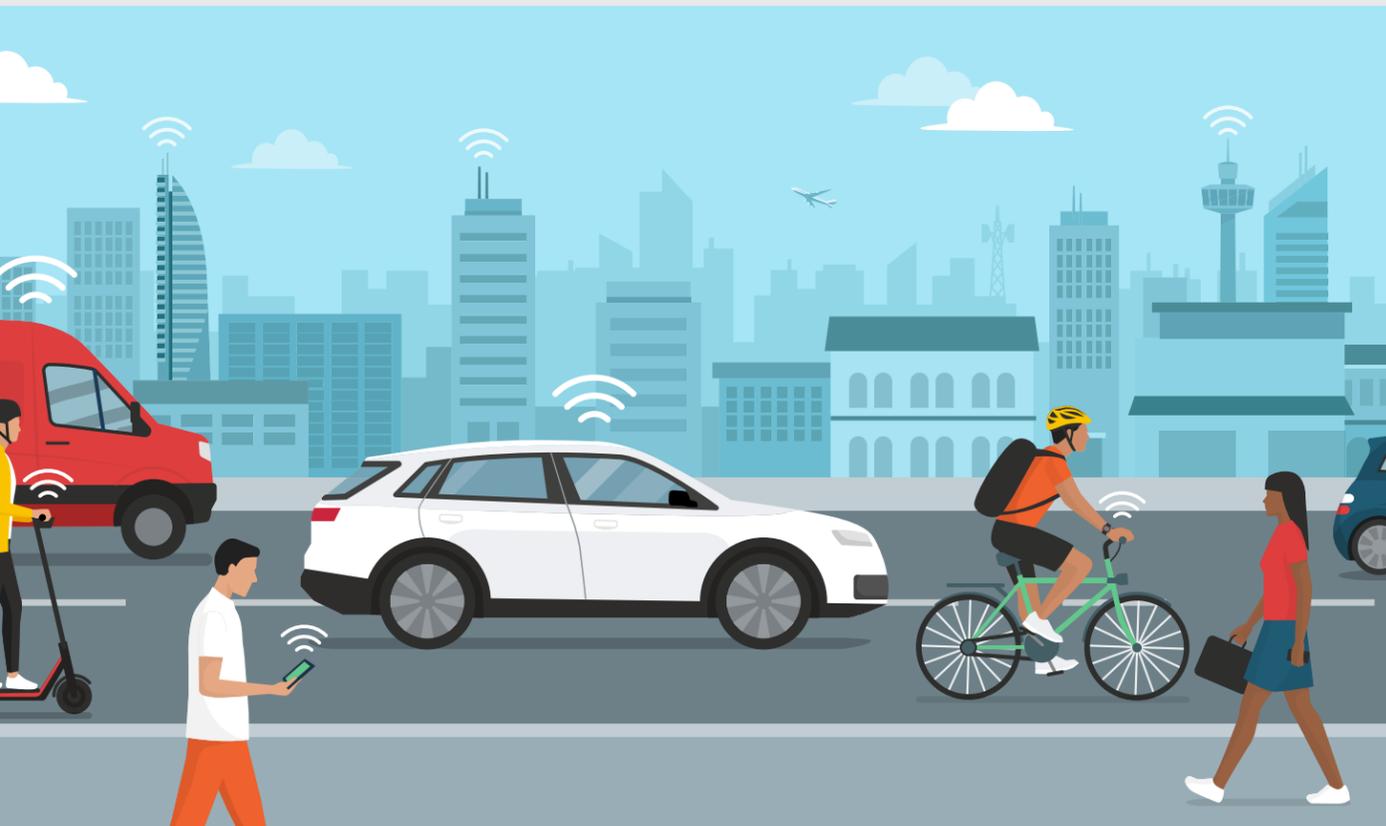




Strategy 4. Proactively prepare for connected and autonomous vehicles

Actions

- Consider pilot projects to lay the groundwork for and evaluate the effectiveness of various new technologies
- Prepare for connected vehicles by developing maintenance and infrastructure plans to ensure street readiness
- Prepare for autonomous or self-driving vehicles by developing policies to manage potentially significant increases in miles driven and traffic volumes within the city, including limiting zero-passenger miles and incentivizing shared use
- Ensure that safety is a priority when testing and implementing new technologies



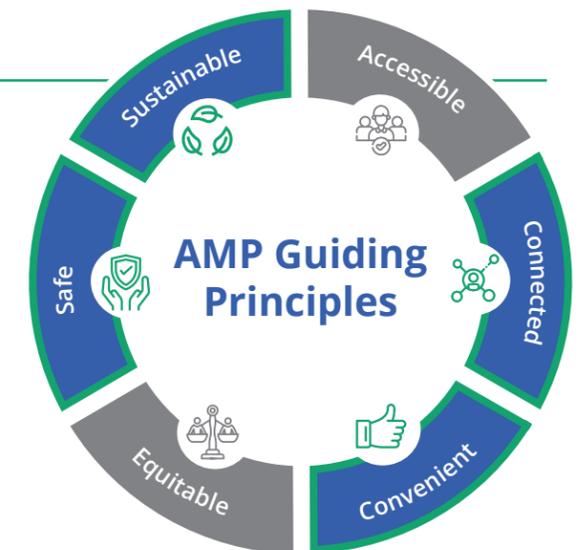
Addressing the Need

Autonomous and connected vehicles have the potential to improve roadway safety, enhance mobility for persons with disabilities, and potentially reduce congestion. Vehicle technology is advancing quickly, and the City needs to be well-positioned to adapt to these changes. It is important to prepare for connected vehicle technology through strategic investments that accommodate vehicle-to-infrastructure and vehicle-to-vehicle communications, which will help travelers find parking spaces, avoid traffic and crashes, navigate hazardous conditions, and more. Proactive policy making and monitoring will be needed to address potential for increased travel and congestion associated with the development and deployment of autonomous vehicles.

Advancing City Plans and Goals

Smart Mobility Program (20-Year Goals)

- Accommodate Self-Driving Vehicles and Connected Vehicles
- Accommodate Vehicle-to-Infrastructure Communications
- Accommodate Vehicle-to-Vehicle Communications





Strategy 5. Develop a framework for pilot projects to test new modes, infrastructure, or initiatives

Actions

- Create standards for appropriate use of pilot projects, including timeframes, public process, evaluation, and opportunities to make adjustments
 - Build upon lessons learned from the Dockless Mobility Pilot as well as national best practices from peer cities
 - Promote a framework that ensures transparency in pilot project execution

A pilot project is a small-scale, preliminary project or test that is conducted to evaluate feasibility, cost, effects, and improvements prior to the implementation of a full-scale or more expensive, resource-intensive project.

To date, transportation and smart mobility pilot projects haven taken many forms in Alexandria, such as Passive Optical Networks (PON) for traffic signal control, testing of shared bicycles and scooters (Dockless Mobility Pilot), conversion of on-street parking to sidewalk extensions (Parklet Pilot Program), and testing zero-emissions hydrogen fuel cell bus technology.



Addressing the Need

Flexible planning and a standard citywide framework are needed as new mobility options and technologies become available to ensure Alexandria is testing them with consistency, transparency, and a focus on equity.

Advancing City Plans and Goals

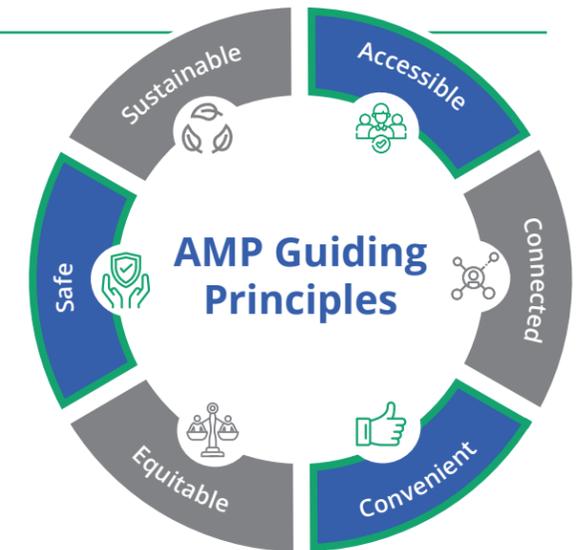
Smart Mobility Framework Plan

- Improve Accessibility, Plan for Emerging and Future Transportation Technologies

Environmental Action Plan 2040

- Adopt Permanent Regulations for Shared Mobility Devices Such as Dockless Bikes, Electric Scooters, and Other Personal Mobility Devices by Fiscal Year 2023

Vision Zero Action Plan



Credit: The Center for Transportation and the Environment (CTE)



Metrics

The strategies and policies in this chapter are intended to move the needle on the following measurable metrics. Additional details on metrics, including applicable targets for future years, can be found in **Appendix II - Monitoring, Reporting, and Key Performance Indicators**.

Metric

Number of intersections with smart signal technology

Percent of intersections with smart signal technology* in Equity Emphasis Areas

Positive rating of traffic flow on major streets (Resident Survey) **

Transit travel times on Duke Street, Van Dorn Street, and upper King Street

Equity Emphasis Areas were developed by the Metropolitan Washington Council of Governments using tract-level Census data to identify communities that have significant concentrations of low-income and/or minority populations. For more information, see **Appendix I - Monitoring, Reporting, and Key Performance Indicators**.

* Intersections with "smart signal technology" include those with traffic signals that are equipped with transit signal priority, emergency vehicle preemption, and/or activated adaptive signals.

** The Alexandria Resident Survey reports results based on race/ethnicity, income, and age in addition to all residents.

Credit: Redmon Group, Inc.

CITY OF ALEXANDRIA EST. 1749

Bus Arrivals

Upcoming Arrivals

M metro	10B: HUNTING POINT SOUTH N Washington St & King St Next Arrival: 43 min
DASH	DASH AT7: Lee Center King St and S Royal St Next Arrival: 45 min
DASH	DASH AT3-4: ParkFairfax - Old Town/City Hall King St and N Royal St Next Arrival: 57 min
M metro	10B: BALLSTON NORTH S Washington St & King St Scheduled: 1:51 PM, 2:21 PM, 2:50 PM, 3:20 PM

eb Capital Bikeshare

Market Square / King St & Royal St

BIKES: 14 | DOCKS: 1

King Street Trolley

The Trolley operates every 10-15 minutes on this schedule:

Sun - Wed: 11:00 AM - 10:30 PM
Thur - Sat: 10:30 AM - 12:00 mid

King Street-Old Town Metro

YL	Fort Totten 6 min • 18 min	YL
	Huntington 1 min • 19 min	

Weekday service adjustments for maintenance May 20-24 • blue line

1:30 PM Tuesday, May 21, 2019

Logos: GO Alex, DASH, transit display redmon group, weather: 72° High, 55° Low



Streets

How the City designs and manages its streets.



Introduction

The streets of Alexandria are a limited public resource that must support multiple functions and serve many types of users including people who drive, walk, take transit, bike, or ride scooters. While other chapters address walking, biking, transit, and how technology can make our streets safer and improve traffic flow (smart mobility), a major focus of this chapter is on how the City will manage streets to prioritize local travel, improve safety, reduce congestion and cut-through traffic, and ensure that all users are considered in decisions surrounding our streets. Our streets also serve valuable purposes beyond mobility including social interaction, recreation, festivals, commerce, dining, and others that contribute to vibrant life in Alexandria.

This chapter incorporates two major existing City policies that recognize that streets serve a variety of users and that all need to be accommodated safely: the Complete Streets policy and Design Guidelines—related to how we design our streets for all users—and the Vision Zero Policy and associated ***Vision Zero Action Plan***, which takes a multifaceted, data-driven approach to eliminating serious travel-related injuries and fatalities.

This chapter does not duplicate these efforts, but attempts to advance them, while seeking to address concerns related to excessive traffic on local streets.



Key Context



37

average number of people killed or seriously injured each year using Alexandria's streets¹



42%

of traffic on arterial streets in central Alexandria is just passing through

During peak travel periods, major streets experience their greatest amount of delay resulting in driver frustration and a diversion of traffic to local streets.



560 miles

of travel lanes

2,300

intersections

320 miles

of sidewalks²



34%

of Alexandrians have a positive view of traffic flow in the city

In the 2020 Resident Survey, respondents gave lower marks to traffic flow, car travel, overall ease of travel, public parking, and traffic enforcement compared to 2018. The rating for traffic flow is the lowest ranking since the survey began in 2016.³



1. Vision Zero Action Plan, 2017.

2. Miles of sidewalks in the public right-of-way. Source: City data.

3. Alexandria Resident Survey, 2020.



Existing Programs, Policies, and Initiatives

Several of the related City plans and programs introduced in the Overview chapter contain targets and policies that relate to streets. The goals and targets in the City Strategic Plan call for continued emphasis on multimodal street design to improve ease and safety of getting around by all modes.

The Complete Streets Policy and the Vision Zero Policy and Action Plan responded to needs identified in the 2008 Transportation Master Plan and are now integrated into the Alexandria Mobility Plan (AMP).

Complete Streets Policy and Design Guidelines



The 2011 Complete Streets Policy directed planners, engineers, and developers to evaluate streets for safety and consider design elements and operational practices to enable safe access for all users, regardless of age, ability, or mode of transportation.

In 2016, the Alexandria Complete Streets Design Guidelines were published. The guidelines are a resource for City departments, design professionals, and developers, and communicate expectations regarding the design of the city's public and private streets.



Vision Zero Policy and Action Plan

Alexandria established a Vision Zero policy in 2017 with the goal of zero traffic deaths and serious injuries by 2028. By establishing the policy, the City recognizes that traffic deaths and serious injuries are preventable through proper engineering, enforcement, evaluation, and education.

The 2018 Vision Zero Action Plan is updated every year and identifies high-crash intersections that are priorities for safety improvements. The Action Plan lists the steps the City will take to improve data collection and evaluation; enhance City processes and collaboration; build safe streets for everyone; and promote a culture of safety.

Street Maintenance

Repaving Program

City streets are resurfaced based on their physical condition. When streets are planned for resurfacing, City staff work with the community to identify priority locations to improve safety, accessibility, and mobility by making changes such as upgrading curb ramps, adding missing crosswalks, upgrading high-priority crossings, and repairing sidewalks.

Street Cleaning and Snow Removal Program

The City's street cleaning program is responsible for street sweeping, leaf collection, and snow removal. This program maintains clean and accessible streets for all street users based on seasonal changes.





Policies

The Streets chapter policies will guide the City's decision-making around programs and improvements that will reduce and mitigate the effects of cut-through traffic, improve safety, and leverage technology on city streets.

Policy A: Protect neighborhoods from cut-through traffic

Reduce cut-through traffic burdening City neighborhoods.

The City will pursue a multifaceted approach to reduce neighborhood cut-through traffic that burdens Alexandrians who live on, work on, or use local city streets. Through this pursuit, the City will work to balance the needs of local traffic and regional connectivity.

Policy B: Achieve Vision Zero

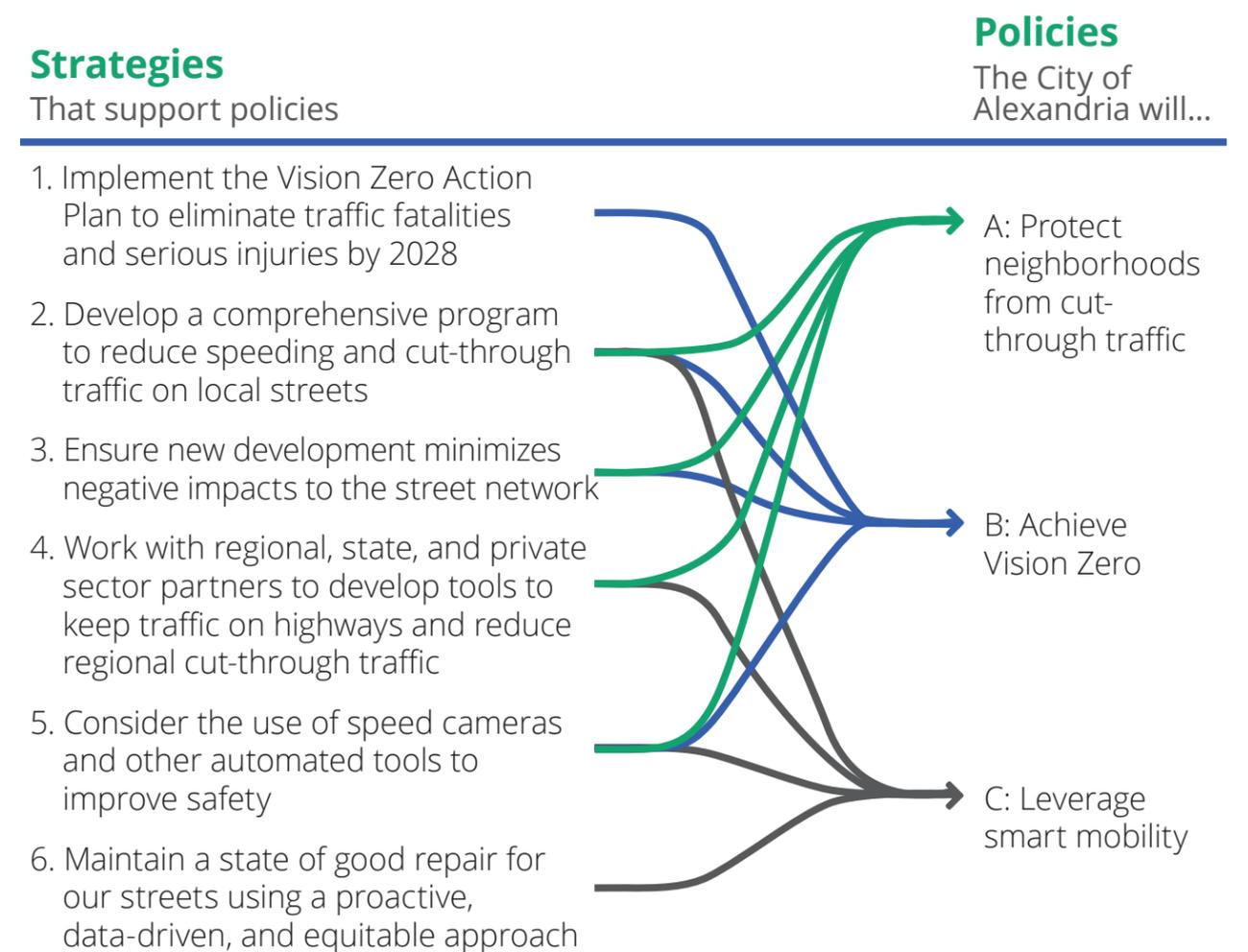
Use data to eliminate traffic-related deaths and serious injuries by 2028.

An average of 37 people in Alexandria are killed or seriously injured each year using the City's streets.⁴ These injuries and deaths are preventable. The City will prioritize the use of data—particularly crash, crash risk, and traffic safety data—in decision-making to eliminate serious injuries and fatalities. A proactive, data-driven approach will provide transparency and equity when developing priorities, processes, and making decisions.

Policy C: Leverage smart mobility

Recognizing that driving is important in the City, use smart mobility to manage congestion and neighborhood safety.

Through the application of Alexandria's Smart Mobility Framework Plan, the City will apply technology to streets and leverage data to better manage traffic, enhance safety, and increase its understanding of how the street network functions to improve quality of life in Alexandria.



4. Vision Zero Action Plan, 2017.



Strategies

Strategy 1. Implement the Vision Zero Action Plan to eliminate traffic fatalities and serious injuries by 2028

Actions

- Develop annual work plan priorities for promoting a culture of safety, building safer streets, improving data collection, and enhancing City processes and collaboration
- Prioritize high crash intersections and corridors for improvements, especially those in Equity Emphasis Areas
- Evaluate crash data for each project to enhance data-driven decision-making
- Apply national best practices as appropriate



Addressing the Need

Between 2016 and 2020, 21 people were killed and 144 people were seriously injured while traveling on Alexandria’s streets.

In addition to the life-altering impacts of these crashes, the perceived danger of being involved in a crash keeps many people from walking and biking, which limits the City’s ability to achieve a wide range of goals including reducing traffic congestion and greenhouse gas emissions.

61% of respondents would ride bikes more and 57% would walk more if they felt safer from traffic.⁶

More broadly, crashes contribute to travel delays and negatively affect the reliability of the transportation system.

Advancing City Plans and Goals

Age Friendly Plan for a Livable Community

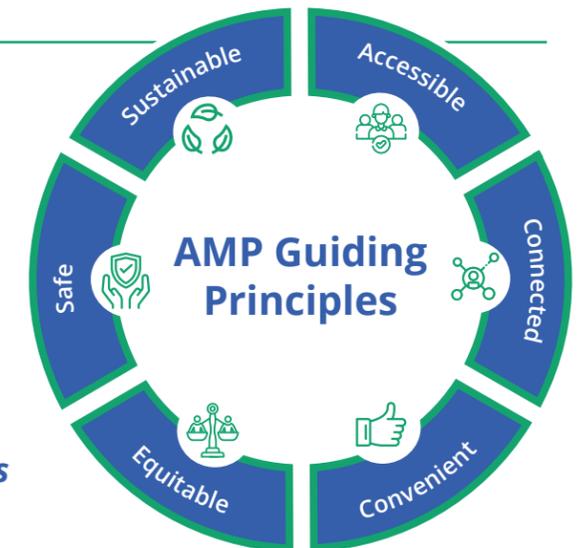
- Safe Walking, Biking, and Driving

Environmental Action Plan 2040

Vision Zero Action Plan

- Build Safe Streets for Everyone

Complete Streets Policy and Design Guidelines



6. Resident Transportation Needs Survey, 2017.



Strategy 2. Develop a comprehensive program to reduce speeding and cut-through traffic on local streets

Actions

- Outline procedures for addressing and monitoring cut-through traffic, traffic congestion, and speeding
- Develop criteria and list of data needs tailored to each traffic issue
- Identify specific design solutions appropriate for the street type and location to encourage regional traffic to stay on major thoroughfares



Addressing the Need

Congestion and cut-through traffic are significant issues in Alexandria. During outreach conducted in the summer and fall of 2019, 71 percent of respondents cited congestion as the biggest challenge for the future of mobility in Alexandria.

Forty-two percent of traffic in central Alexandria consists of trips that start and end outside of Alexandria.⁴ Less regional traffic on local streets may improve safety and the quality of life for residents and can help local traffic move more efficiently.

Advancing City Plans and Goals

City Strategic Plan

- Ease of Getting to Places

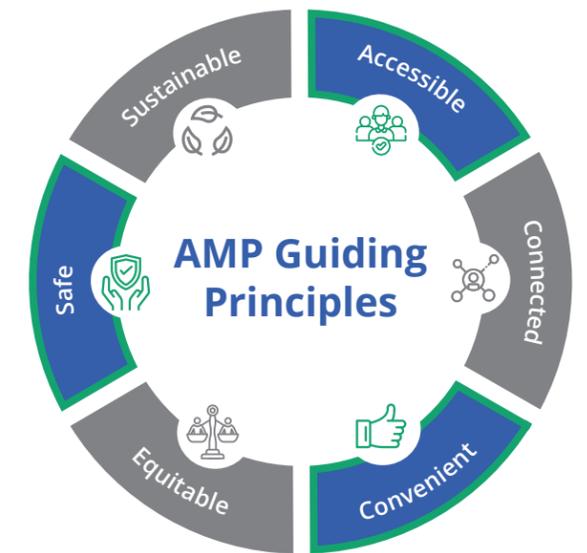
Complete Streets Policy and Design Guidelines

Smart Mobility Framework Plan

- Traffic Management

Vision Zero Action Plan

- Build Safe Streets for Everyone



4. Central Alexandria Traffic Study, 2017.



Strategy 3. Ensure new development minimizes negative impacts to the street network

Actions

- Update guidance for developers to better reflect City goals through traffic impact studies and best practices from around the country
- Require improved data collection and reporting after implementation
- Ensure proper consideration of all users through improved methods for measuring service levels for all modes and safety impacts on our transportation network
- Encourage study methodologies and mitigation measures such as transportation demand management programs and street design changes that place higher priority on local trips rather than regional trips to help reduce cut-through traffic



Addressing the Need

New developments have the potential to improve the areas around them, bringing more transit and safer intersections. However, they also have the potential to add more traffic and congestion.

Current traffic study practices for new developments focus on vehicle delay (expressed by “Level of Service”) but fail to fully consider impacts on other street users.

Advancing City Plans and Goals

Age Friendly Plan for a Livable Community

- Safe Walking, Biking, and Driving

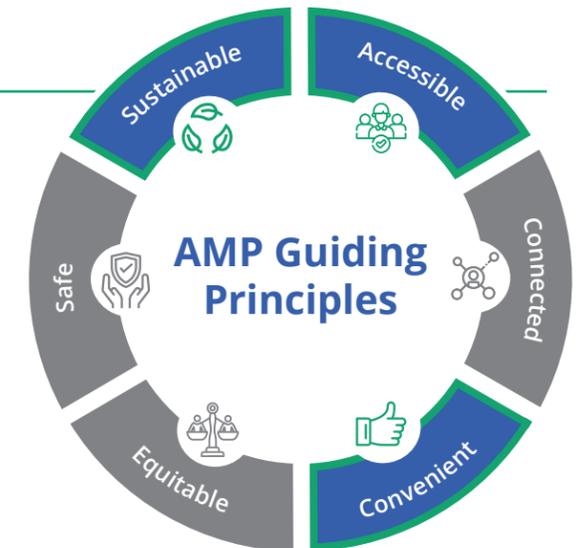
Complete Streets Policy and Design Guidelines

Environmental Action Plan 2040

- Reduce VMT, Green Building

Vision Zero Action Plan

- Enhance City Processes and Collaboration
- Build Safe Streets for Everyone





Strategy 4. Work with regional, state, and private sector partners to develop tools to keep traffic on highways and reduce regional cut-through traffic

Actions

- Coordinate with other jurisdictions and regional bodies to evaluate pricing strategies and other policies that promote highway travel versus travel on local streets
- Explore signal timing as a tool to keep regional traffic on highways
- Utilize variable messaging systems to use real-time travel comparisons to promote high-occupancy toll (HOT) lanes



Addressing the Need

Congestion and cut-through traffic are significant issues in Alexandria and many jurisdictions in the region. During outreach conducted in the summer and fall of 2019, 71 percent of respondents cited congestion as the biggest challenge for the future of mobility in Alexandria.

Forty-two percent of traffic in central Alexandria consists of trips that start and end outside of Alexandria.⁵ Coordination of efforts and resources with regional, state, and private sector partners is needed to address regional cut-through traffic.

Alexandria's transportation network is linked to a complex regional network with multiple jurisdictions, transit operators, and statewide entities, making close coordination critical.

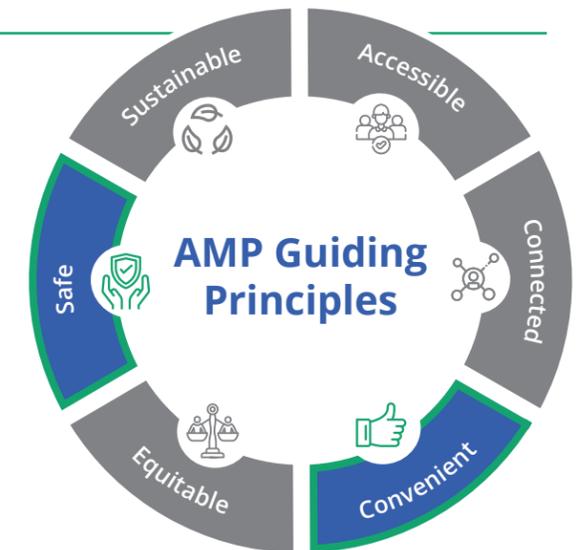
Advancing City Plans and Goals

Smart Mobility Framework Plan

- Optimize Traffic Flow, Improve Travel Times, Reduce Congestion

City Strategic Plan

- Distinctive and Vibrant Neighborhoods, Multimodal Transportation



5. Central Alexandria Traffic Study, 2017.



Strategy 5. Consider the use of speed cameras and other automated tools to improve safety

Actions

- Consider speed cameras in school zones, enabled in 2020
- If data demonstrates a safety benefit with the use of automated enforcement tools, explore legislative measures to expand the City’s ability to place speed cameras in areas where they can most improve safety
- Partner with the Alexandria Police Department to enforce traffic laws to protect vulnerable street users and promote equity

Automated Enforcement Using Cameras. Legislation passed in the summer of 2020 allows state and local police in Virginia to use speed cameras near highway construction zones and school zones. Alexandria is currently studying where to implement speed cameras.



Addressing the Need

Decades of unequal transportation investments and exclusionist planning policies mean that vulnerable populations are more likely to live on or near poorly designed roadways where crashes are more likely to occur, increasing their likelihood of being involved in a crash.

Human bias in traffic enforcement has resulted in the deaths of Black, Indigenous, and people of color during routine traffic stops. There is a need to balance these safety disparities with a better understanding of human bias in enforcement. Automated enforcement is one strategy to help reduce this human bias.

In 2020, the League of American Bicyclists and Safe Routes Partnership, two prominent organizations in the field of traffic safety, removed “enforcement” from their program frameworks. The League found that **“enforcement as a stand-alone traffic safety tactic is not particularly effective in achieving long-term safety outcomes,”** and supports the use of **alternatives to police-led traffic enforcement.** Automated enforcement is one alternative, along with street design improvements and educational diversion programs.

Advancing City Plans and Goals

City Strategic Plan

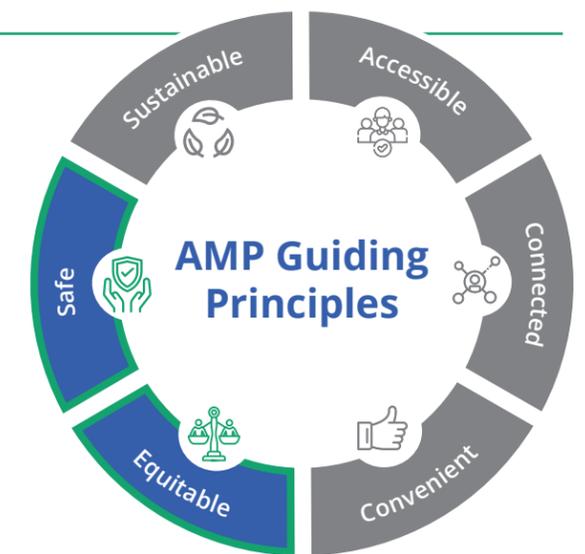
- Inclusive City, Safe and Resilient Community

Vision Zero Action Plan

- Improve Data Collection and Evaluation, Promote a Culture of Safety

ALL Alexandria

- Target equitable enforcement efforts



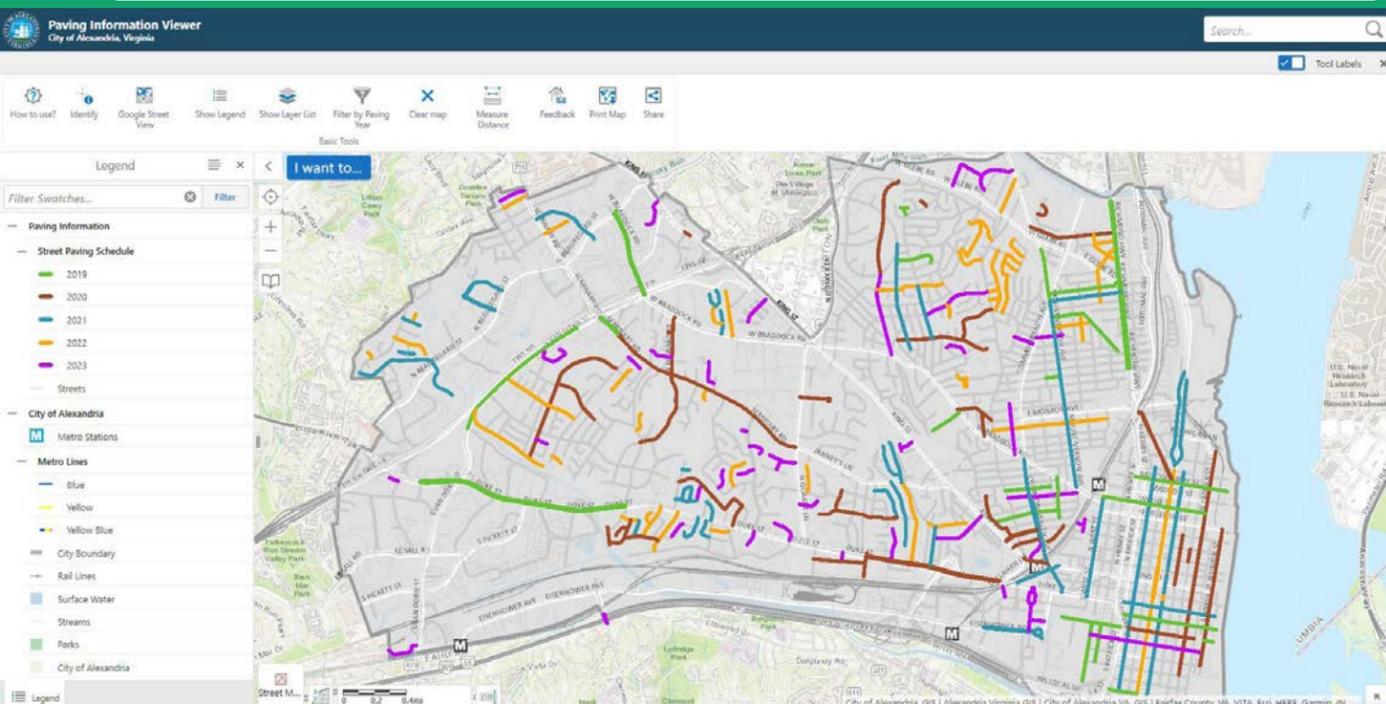


Strategy 6. Maintain a state of good repair for our streets using a proactive, data-driven, and equitable approach

Actions

- Seek to maintain our transportation assets to achieve a state of good repair in a cost-effective and minimally disruptive manner by coordinating utility work, fiber installation, and other street improvements when possible
- Use state and federal required methodologies based on pavement and bridge condition to ensure continued funding and equitable distribution of resources
- When local funding is available for additional service requests, ensure they are distributed evenly throughout the city

State of good repair refers to the maintenance, replacement, and rehabilitation of assets. City staff identify priority locations to **improve safety, accessibility, and mobility** by making changes such as **repaving roads, upgrading curb ramps, adding missing crosswalks, and repairing sidewalks.**



The City of Alexandria's Pavement Schedule Viewer

Addressing the Need

Streets that are not maintained can be safety hazards, barriers for persons with disabilities, or cause more long-standing damage. It is important to avoid skewing repairs to just where there are requests, but incorporating where data shows it is required. Continuous repair and rehabilitation of city streets and infrastructure will increase safety and accessibility while benefiting the user experience along city streets.

The City of Alexandria's **Street Maintenance and Repair program** aims to repair roads, sidewalks, curbs and gutters, and pavement areas in the public right-of-way. The City, with financial support from the Virginia Department of Transportation State of Good Repair program, manages its pavement by **regularly assessing condition, analyzing budget needs, performing routine maintenance, and undertaking minor and major paving projects.**

Advancing City Plans and Goals

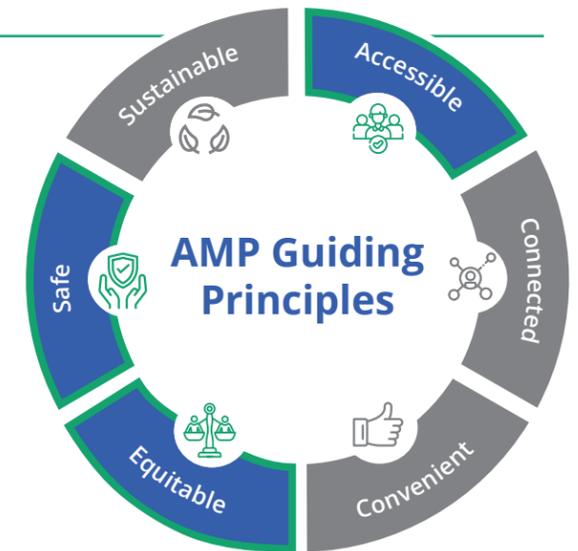
ALL Alexandria

City Strategic Plan

- Multimodal Transportation
- Distinctive and Vibrant Neighborhoods

Vision Zero Action Plan

- Improve Data Collection and Evaluation
- Build Safe Streets for Everyone



Metrics

The strategies and policies in this chapter are intended to move the needle on the following measurable metrics. Additional details on metrics, including applicable targets for future years, can be found in **Appendix II - Monitoring, Reporting, and Key Performance Indicators**.

Metric

Number of fatal and serious crashes

Average Pavement Condition Rating (Pavement Condition Index)

Percent of Transportation Management Plans evaluated that meet mode split targets

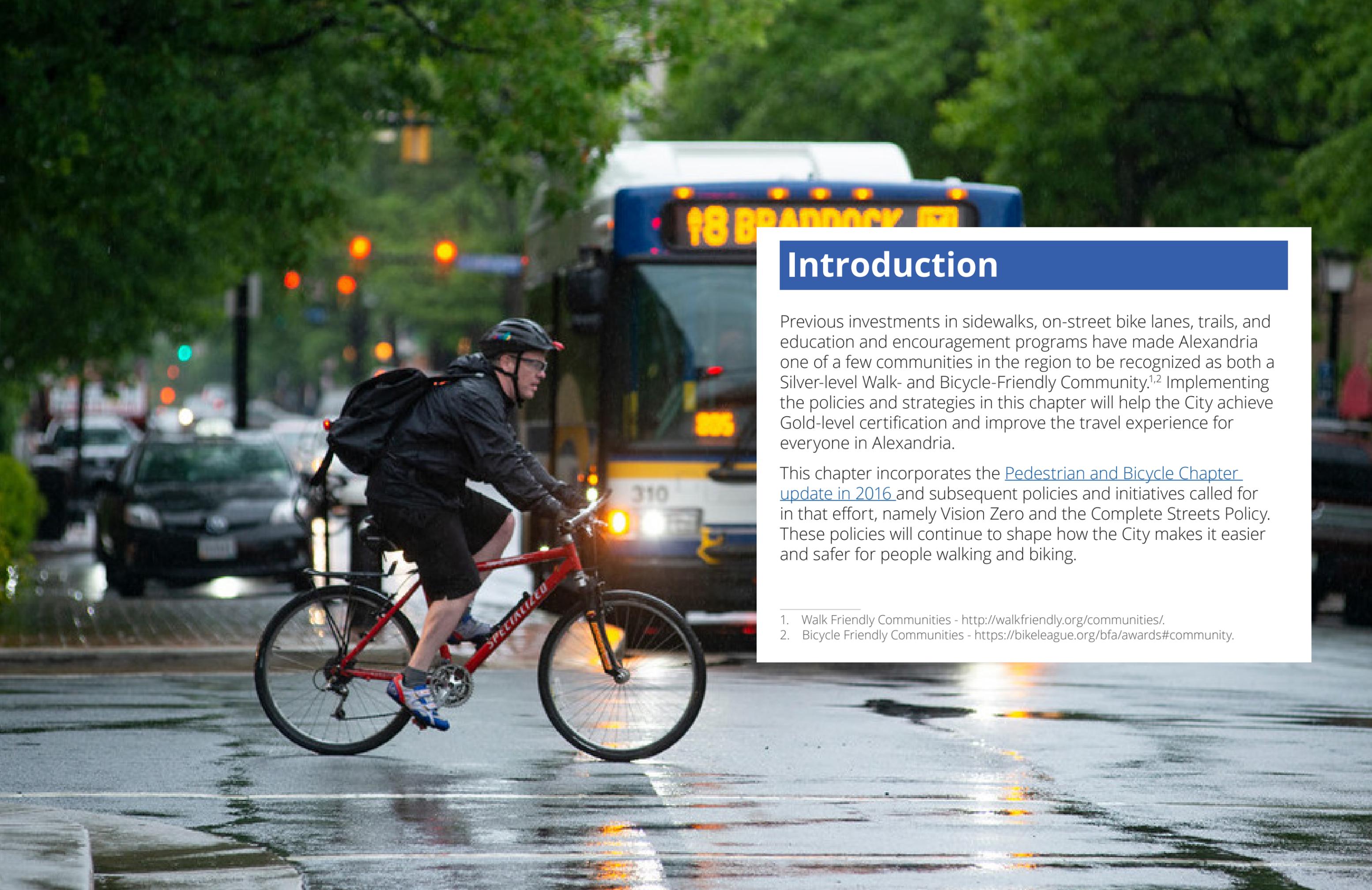
Credit: Evan Michio for City of Alexandria





Pedestrian and Bicycle

How the City is making it easier and safer to walk and bike.



Introduction

Previous investments in sidewalks, on-street bike lanes, trails, and education and encouragement programs have made Alexandria one of a few communities in the region to be recognized as both a Silver-level Walk- and Bicycle-Friendly Community.^{1,2} Implementing the policies and strategies in this chapter will help the City achieve Gold-level certification and improve the travel experience for everyone in Alexandria.

This chapter incorporates the [Pedestrian and Bicycle Chapter update in 2016](#) and subsequent policies and initiatives called for in that effort, namely Vision Zero and the Complete Streets Policy. These policies will continue to shape how the City makes it easier and safer for people walking and biking.

1. Walk Friendly Communities - <http://walkfriendly.org/communities/>.

2. Bicycle Friendly Communities - <https://bikeleague.org/bfa/awards#community>.



Key Context



59%

of trips in Alexandria are less than 3 miles

Short trips like these are amenable to biking, walking, or transit when safe, convenient, and accessible routes are provided.³



5%

of Alexandria residents walk or bike to work

This is higher than the statewide average of 3%, and higher than Arlington's 4%; however, it is lower than Washington, DC's 18%.⁴

Walking is the third most used travel mode on a typical weekday after personal car use and travel by Metrorail.⁵ **"Safe and comfortable places to walk and bike"** was one of the top four priorities cited during public engagement in fall 2019.⁶

3. 2017-2018 Regional Travel Survey, National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments
 4. American Community Survey 2019 5-Year Estimates
 5. 2017-2018 Regional Travel Survey, National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments
 6. Alexandria Mobility Plan Priority Feedback, 2020



Over 50%

Alexandria residents that walked or biked for transportation in the past month

An even greater percentage walked, ran, or biked for recreation or fitness.⁷

Perceptions of walking vary by community. Public comments indicated that Old Town "revolves around walking," while in Arlandria the City "does not do much to support walking."



320 miles

of sidewalks

21 miles

of on-street bike lanes

23 miles

of paved trails

The paved trails provide full separation from motor vehicles and serve transportation and recreational purposes for a wide range of users of all ages and abilities.



37

Capital Bikeshare stations in 2021

with plans to add several more in the next few years.



52

pedestrian-involved crashes in 2020⁸

10

bicycle-involved crashes in 2020⁸

Safety for people walking and bicycling needs improvement.

7. Alexandria Resident Transportation Needs Assessment Survey, 2017.
 8. Vision Zero Performance Dashboard.



Existing Programs, Policies, and Initiatives

Complete Streets

Alexandria's Complete Streets Program works to implement the City's priority pedestrian and bicycle projects as identified in the 2008 Transportation Master Plan and Pedestrian and Bicycle Chapter update in 2016 and in accordance with the Vision Zero policy and Action Plan.

Repaving Program

City streets are resurfaced based on their condition rating. When streets are resurfaced, City staff identify areas where planned portions of the pedestrian and bicycle network also can be implemented by upgrading curb ramps, adding missing crosswalks, installing bike lanes, repairing sidewalks, and more to improve conditions for users of all ages and abilities.

Safe Routes to School

Alexandria City Public Schools employs a Safe Routes to School (SRTS) Coordinator to facilitate safety programs and organize walking and biking events at all elementary and middle schools. Additionally, the Department of Transportation and Environmental Services has a dedicated SRTS infrastructure planning and construction program as part of the Complete Streets Program.

Multi-Use Trails

Alexandria's trail system features more than 20 miles of paved, off-street, multi-use trails throughout the city, offering safe and enjoyable connections to key destinations for users of all ages and abilities. The City continues to expand the trail network by adding new trails and extending existing trails.

Bicycle Parking

The City of Alexandria is working to increase the number of both short- and long-term bicycle parking spaces. Bicycle parking is usually installed at the request of citizens or businesses. Additionally, the City requires bicycle parking as new development occurs in the city.

Shared Mobility

Capital Bikeshare, the regional bikeshare program, is expanding rapidly into the City of Alexandria. With 37 stations in Alexandria and more on the way, Capital Bikeshare is a convenient way of traveling by bike that can be used by residents and visitors alike. The City also has launched a pilot program to allow private companies to operate shared, dockless bicycles and scooters available for rent.

Walking and bicycling infrastructure benefit more than just those who walk or bike. For example, new mobility options, such as bikeshare or scooters, benefit from bicycle infrastructure on the road. Sidewalks that are Americans with Disabilities Act (ADA) accessible—have smooth surfaces, adequate width, and curb ramps on all corners—help not only those using mobility devices such as wheelchairs, but also those using strollers and wheeled luggage.





Policies

The Pedestrian and Bicycle chapter policies will guide the City's decision-making around building out a citywide network of safe and connected sidewalks, bike lanes, and trails.

Policy A: Prioritize Safety

Focus on vulnerable street user crashes to help achieve Vision Zero.

The City will focus on crashes involving vulnerable street users, including those who walk and bike, as a means of achieving Vision Zero.



Policy B: Address Network Gaps

Complete pedestrian and bicycle networks equitably and cost-effectively.

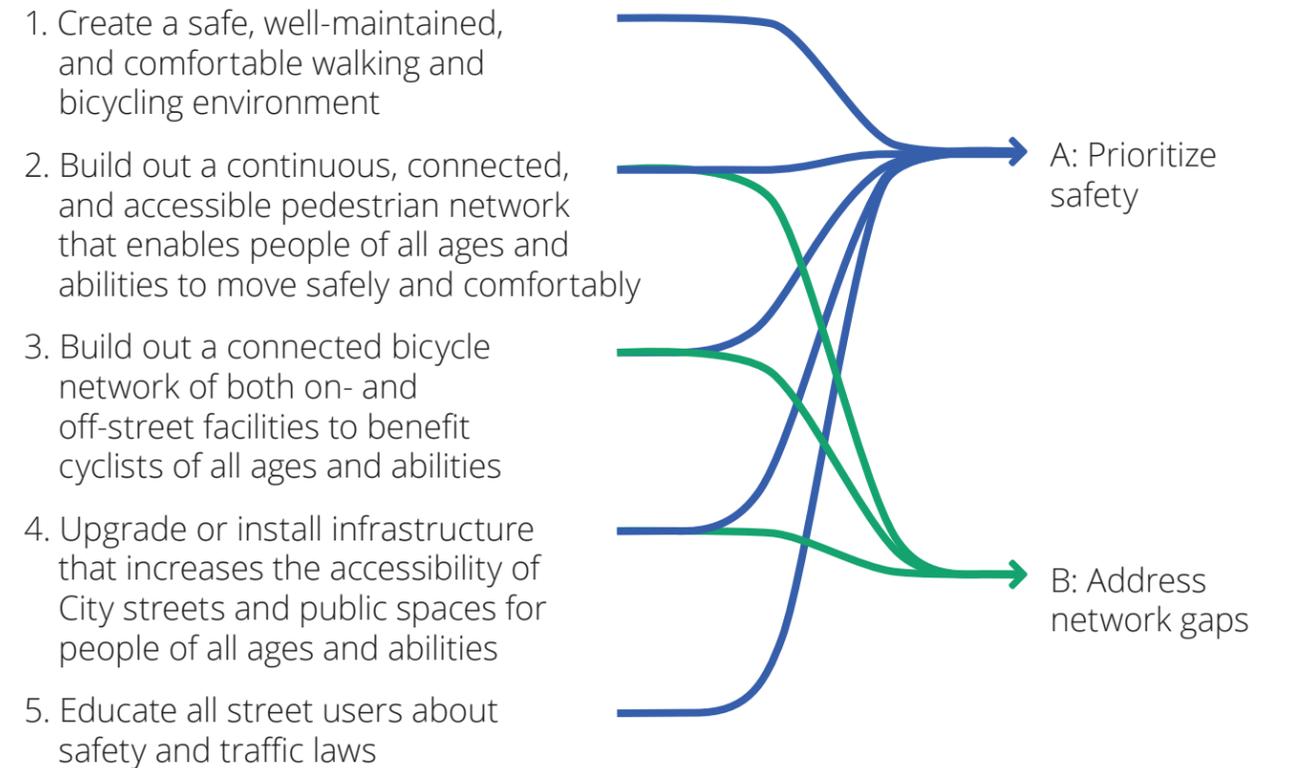
The City will complete the bicycle and pedestrian networks by pursuing funding for priority projects, accelerating work in underserved areas, and taking advantage of opportunities to make improvements through the repaving program.

Strategies

That support policies

Policies

The City of Alexandria will...





Strategies

Strategy 1. Create a safe, well-maintained, and comfortable walking and bicycling environment

Actions

- Improve signage and wayfinding for people biking and walking
- Invest in ongoing maintenance and repair of the pedestrian and bicycle network
- Conduct construction inspections, address priority lighting deficiencies, and ensure timely snow plowing to ensure infrastructure is accessible at all times
- Prioritize safe access to transit, schools, senior centers, recreation centers, and improvements at high-crash locations



Addressing the Need

There is an increasing demand for safe and comfortable walking and bicycling facilities, as reflected in the Resident Transportation Needs survey the City conducts every two years. In 2016, 51 percent of the respondents indicated they would walk or bike more if there were more off-street walking, biking, or multi-use paths. In 2018, this increased to 66 percent of respondents.⁹

The safety of people walking and biking is a serious concern. From 2016 to 2019, pedestrian-involved crashes accounted for 30 percent of the serious injury and fatal crashes in the City of Alexandria. Nine pedestrians were killed and eight bicyclists were seriously injured during the same time frame.¹⁰

Electric shared bikes were introduced in Alexandria in 2019, and can help overcome a primary barrier to biking in the city—its hilly topography. The increasing popularity of e-bikes, both shared and personal, is likely help grow the number of cyclists in Alexandria, making improved facilities even more essential.

Advancing City Plans and Goals

Age Friendly Plan For A Livable Community

- Pedestrian-Safe Streets

Environmental Action Plan 2040

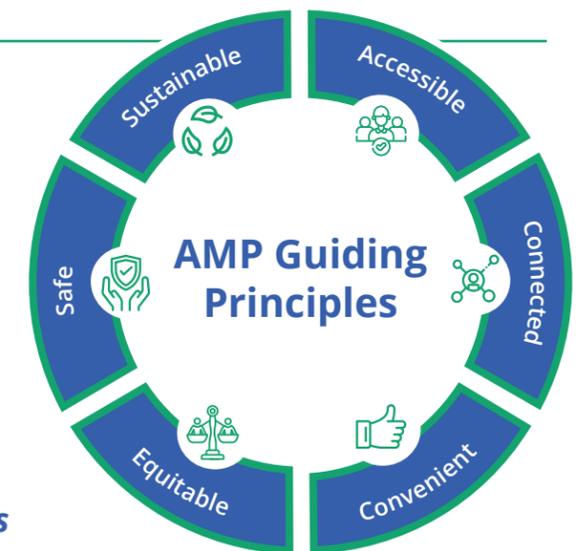
- Prioritize Low-Carbon Mobility Options
- Reduce Vehicle Miles Traveled (VMT)

Vision Zero Action Plan

- Build Safe Streets for Everyone

Complete Streets Policy and Design Guidelines

- Accommodate All Modes of Travel



9. Alexandria Resident Transportation Needs Assessment Survey, 2017.

10. Vision Zero Performance Dashboard.



Strategy 2. Build out a continuous, connected, and accessible pedestrian network that enables people of all ages and abilities to move safely and comfortably

Actions

- Make existing sidewalks and intersections safer and more comfortable, with a focus on high-crash locations per the Vision Zero Action Plan
- Continue addressing priority sidewalks to ensure sidewalks are present on both sides of all major streets and on at least one side of all other streets
- Reduce conflicts between modes by implementing treatments consistent with national best practices that are context appropriate, including increasing the number and quality of off-street connections and intersection improvements
- Improve off-street pedestrian access through neighborhoods, new developments, and across major barriers such as freeways or rail corridors



Addressing the Need

While nearly all Alexandria residents have easy access to sidewalks in their neighborhoods, 10 percent live within 330 feet of a sidewalk gap. There are sidewalk gaps present within 330 feet of three Alexandria City Public Schools.

Sidewalks are essential for transit access and can support a number of commercial and social activities as well, such as outdoor dining and sidewalk vendors.

Advancing City Plans and Goals

Age Friendly Plan For A Livable Community

- Pedestrian-Safe Streets

Environmental Action Plan 2040

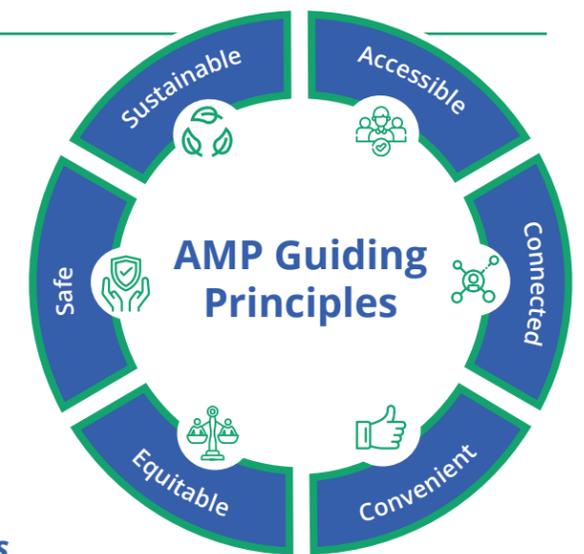
- Prioritize Low-Carbon Mobility Options
- Reduce Vehicle Miles Traveled (VMT)

Vision Zero Action Plan

- Build Safe Streets for Everyone

Complete Streets Policy and Design Guidelines

- Accommodate All Modes of Travel

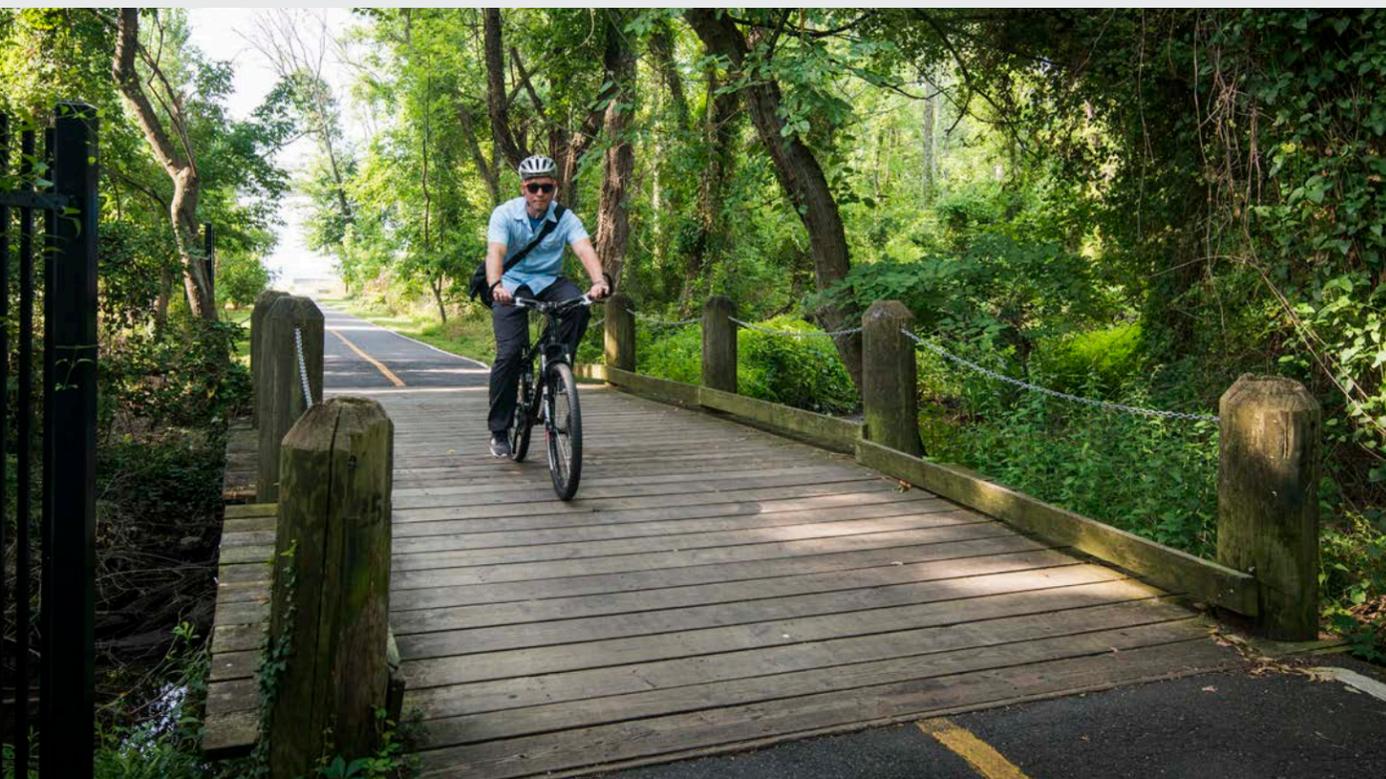




Strategy 3. Build out a connected bicycle network of both on- and off-street facilities and shared mobility devices to benefit riders of all ages and abilities

Actions

- Expand bikeshare and availability of parking for bikes and micromobility devices such as shared/electric bikes and scooters
- Study building upon the planned network of bicycle routes to develop a citywide network of low-stress bicycle routes that are appealing to adults and children who are interested in riding but concerned about safety
- Integrate the off-street trail system with the on-street bicycle network by providing wayfinding and well-designed transitions at trail access points
- Build out the planned bicycle network with both on- and off-street facilities to provide safe connections within and between neighborhoods and to key destinations



Addressing the Need

Currently, 54 percent of the population lives within 1/8 mile of a bike lane or paved trail; however, the network of these types of facilities is not continuous.

For those wanting to bike to work, 62 percent of jobs in the city are within 1/8 mile of a bike lane or paved trail.

To improve the bike network for people of all ages and abilities, the City must build more off-street trails and on-street bike lanes with more separation from motor vehicles. There also is a lack of public bike parking in many commercial, mixed-use, and higher-density residential areas. These facilities also can be used by scooters and other types of micromobility vehicles.

Shared micromobility (Capital Bikeshare, Lime, Bird, etc.) provides users with on-demand access to bicycles, mopeds, and/or scooters at a variety of pick-up and drop-off locations. More people also are purchasing their own small mobility devices to use on a regular basis, increasing the demand for safe places to ride. **About two-thirds of Alexandrians indicated that they would walk and/or bike more if there were more off-street multi-use paths or trails.**¹¹

Advancing City Plans and Goals

Environmental Action Plan 2040

- Prioritize Low-Carbon Mobility Options
- Reduce Vehicle Miles Traveled (VMT)

Vision Zero Action Plan

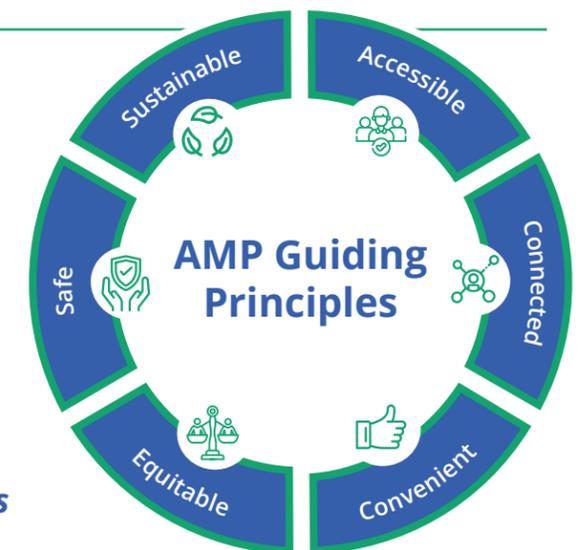
- Build Safe Streets for Everyone

Age Friendly Plan For A Livable Community

- Safe Walking, Biking, and Driving

Complete Streets Policy and Design Guidelines

- Accommodate All Modes of Travel



11. Alexandria Resident Transportation Needs Assessment Survey, 2017.



Strategy 4. Upgrade or install infrastructure that increases the accessibility of City streets and public spaces for people of all ages and abilities

Actions

- When repaving streets, upgrade corners and add high-visibility crosswalks where appropriate with accessible, directional ramps that meet, to the maximum extent possible, current ADA standards
- Upgrade or install new audible pedestrian signal push buttons at existing and new pedestrian signals to enhance access and safety for persons with disabilities
- Address tripping hazards on sidewalks and pedestrian areas as quickly as possible through routine maintenance projects and in response to service requests
- Prioritize safe and accessible access to transit stops, schools, and parks
- Install appropriate street lighting for those walking and bicycling, with consideration to areas with more people of color or low income residents



Addressing the Need

According to the U.S. Census, 11 percent of Alexandria's population is aged 65 and older, 5 percent of the population under the age of 65 lives with a disability, and 17 percent of the population under the age of 16 lives with a disability.¹² Providing safe, comfortable, and accessible walking and biking routes is particularly important for members of these groups and others who may not or cannot drive a personal vehicle. These routes provide opportunities for physical activity and independent travel.

Advancing City Plans and Goals

Age Friendly Plan For A Livable Community

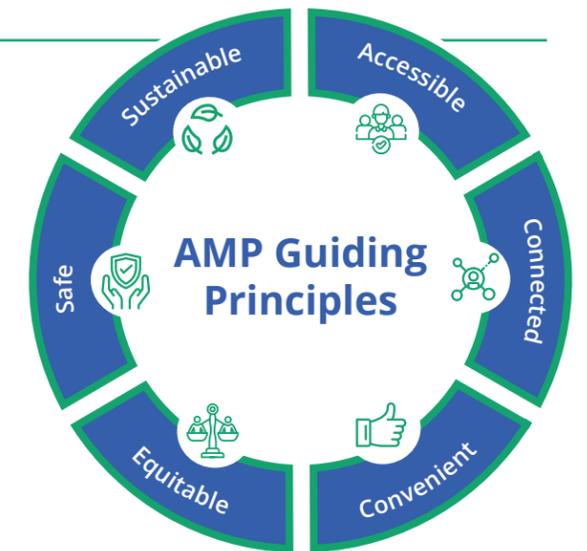
- Safe Walking, Biking, and Driving

Complete Streets Policy and Design Guidelines

- Accommodate All Modes of Travel
- Health and Safety for All Users

Vision Zero Action Plan

- Build Safe Streets for Everyone



12. Demographic and Housing Estimates, American Community Survey 1-Year Estimates, 2019.



Strategy 5. Educate all street users about safety and traffic laws

Actions

- Initiate targeted outreach that aims to increase adult and youth knowledge of safe walking, biking, and driving behaviors and traffic laws related to pedestrian, bicycle, and scooter travel
- Educate public and private sector design professionals, city groups, and the public who are involved with Alexandria’s transportation system on Complete Streets principles and design
- Pursue partnerships to expand the reach of education, outreach, and promotional efforts with GO Alex, the Alexandria Policy Department, Alexandria City Public Schools, MWCOG’s Street Smart Safety Campaign, local advocacy groups, and others

Existing education programs commonly focus on a single mode (for example, driver’s ed or a **"learn to ride"** bicycle safety class) and **may not fully address how different modes should interact on the street**. Virginia law states that drivers must give at least 3 feet of space when passing a person riding a bike. If there is not 3 feet of passing space in the shared travel lane, the driver must change lanes to pass. This can be hard to judge, and bicyclists may often need to ride close to the middle of the lane to avoid opening car doors and other obstacles.

One way to address these challenges is through **better education for all road users**. Frustrated by low attendance at adult bike safety classes, the City of Fort Collins, Colorado rebranded their class for drivers and saw attendance triple in the first year. The 90-minute Bicycle-Friendly Driver class covers:

- Why sharing the road is the safest alternative for both drivers and bicyclists
- What’s legal and what’s not legal, for both drivers and bicyclists
- Common crashes and how to avoid them
- Why bicyclists "take the lane" and what motorists should do in response
- How to navigate bicycle-related infrastructure such as sharrows, bike boxes, and green lanes

Addressing the Need

This strategy builds upon Vision Zero recommendations to reduce speed limits, educate all street users on their rights and responsibilities, and create a shared culture of safety to reduce the disproportionate impacts of crashes on pedestrians, bicyclists, and other vulnerable street users.

An average of 37 people in Alexandria are killed or seriously injured each year using the City’s streets.¹³

When pedestrians and bicyclists are involved in crashes, the crashes are more likely to be serious—34 percent of bicyclist or pedestrian crashes are serious versus just 6 percent of all crashes.

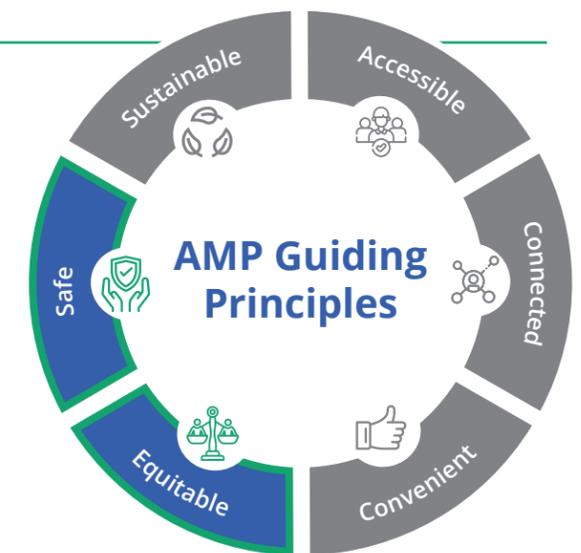
Advancing City Plans and Goals

Vision Zero Action Plan

- Promote a Culture of Safety

Complete Streets Policy and Design Guidelines

- Accommodate All Modes of Travel



13. Vision Zero Action Plan, 2017.





Metrics

The strategies and policies in this chapter are intended to move the needle on the following measurable metrics. Additional details on metrics, including applicable targets for future years, can be found in **Appendix II - Monitoring, Reporting, and Key Performance Indicators**.

Metric

Number of pedestrian- and bicycle-involved crashes

Percent of people walking or biking to work (mode share)

Linear feet of new sidewalk installed per year (Citywide and in Equity Emphasis Areas)

Miles of bicycle facilities (on-street and paved off-street trails) installed per year (Citywide and in Equity Emphasis Areas)

Positive rating of ease of walking (Resident Survey) *

Positive rating of ease of travel by bicycle (Resident Survey)*

Number of repaired curb ramps per year

Number of accessible pedestrian signals installed per year

Annual number of bikeshare trips

Shared mobility trips to and from equity areas (as defined by the Dockless Mobility Program)

Number of designated parking areas for bicycles, e-bikes, and scooters citywide and in equity areas (as defined by the Dockless Mobility Program)

* The Alexandria Resident Survey reports results based on race/ethnicity, income, and age in addition to all residents.

Advancing Pedestrian and Bicycle Priority Projects

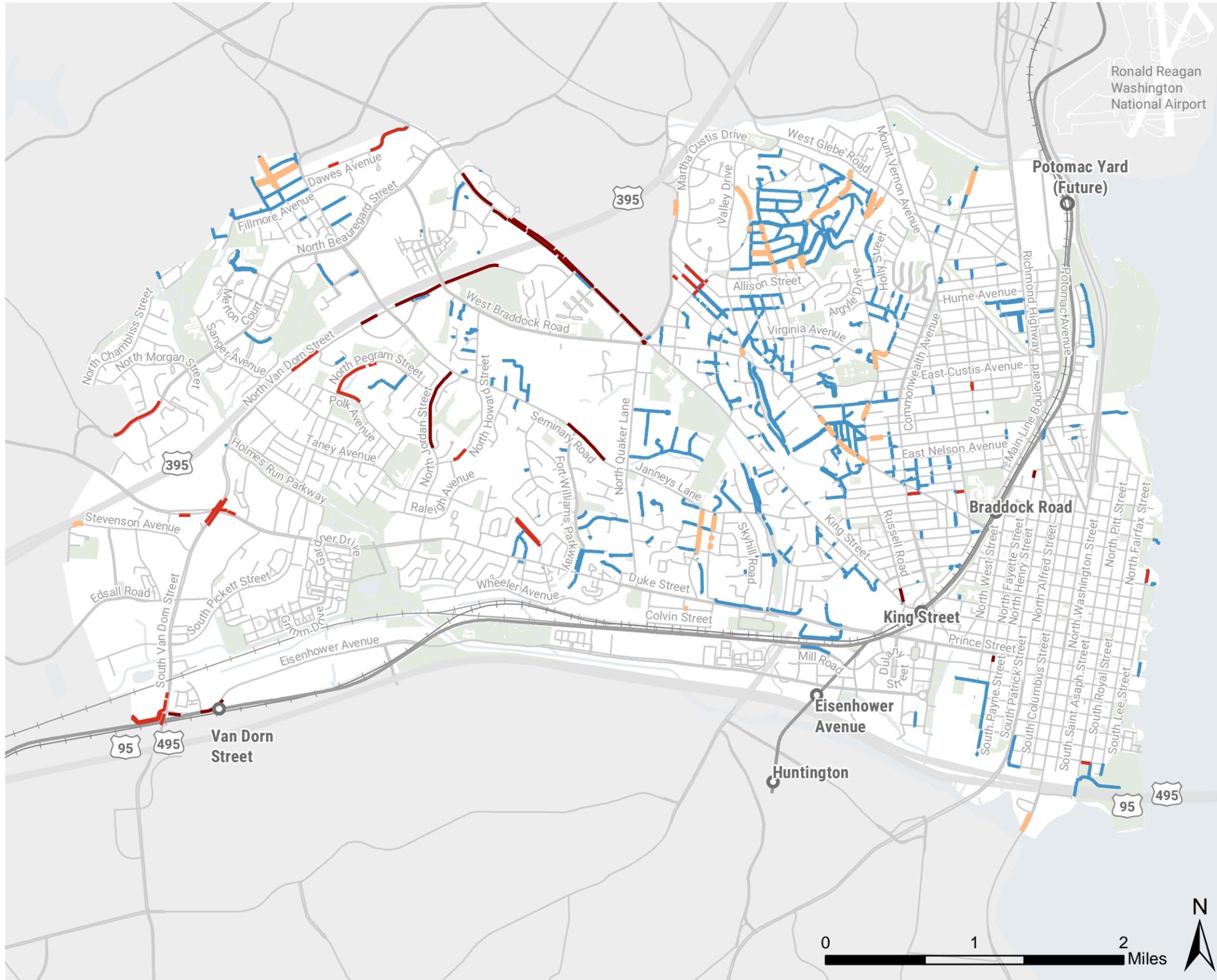
Pedestrian and bicycle projects were identified in the 2016 Pedestrian and Bicycle Chapter update to the 2008 Transportation Master Plan. The project maps and lists have been updated to reflect the progress made since 2016; completed projects have been removed and replaced by the next highest prioritization score. Prioritization results are based on a data-driven analysis of demand, safety, connectivity, and geography. For the full methodology, please refer to the 2016 Bicycle and Pedestrian Chapter update. Project maps are included on the following pages, and project lists can be found [here](#).

The City will continue to pursue funding from grants and through the City's budget process and implement pedestrian and bicycle projects through routine street resurfacing, as part of larger capital investments, and in coordination with developers and redevelopment. Therefore, the order of the projects does not necessarily reflect the order in which they will be implemented.





Pedestrian Priority Projects

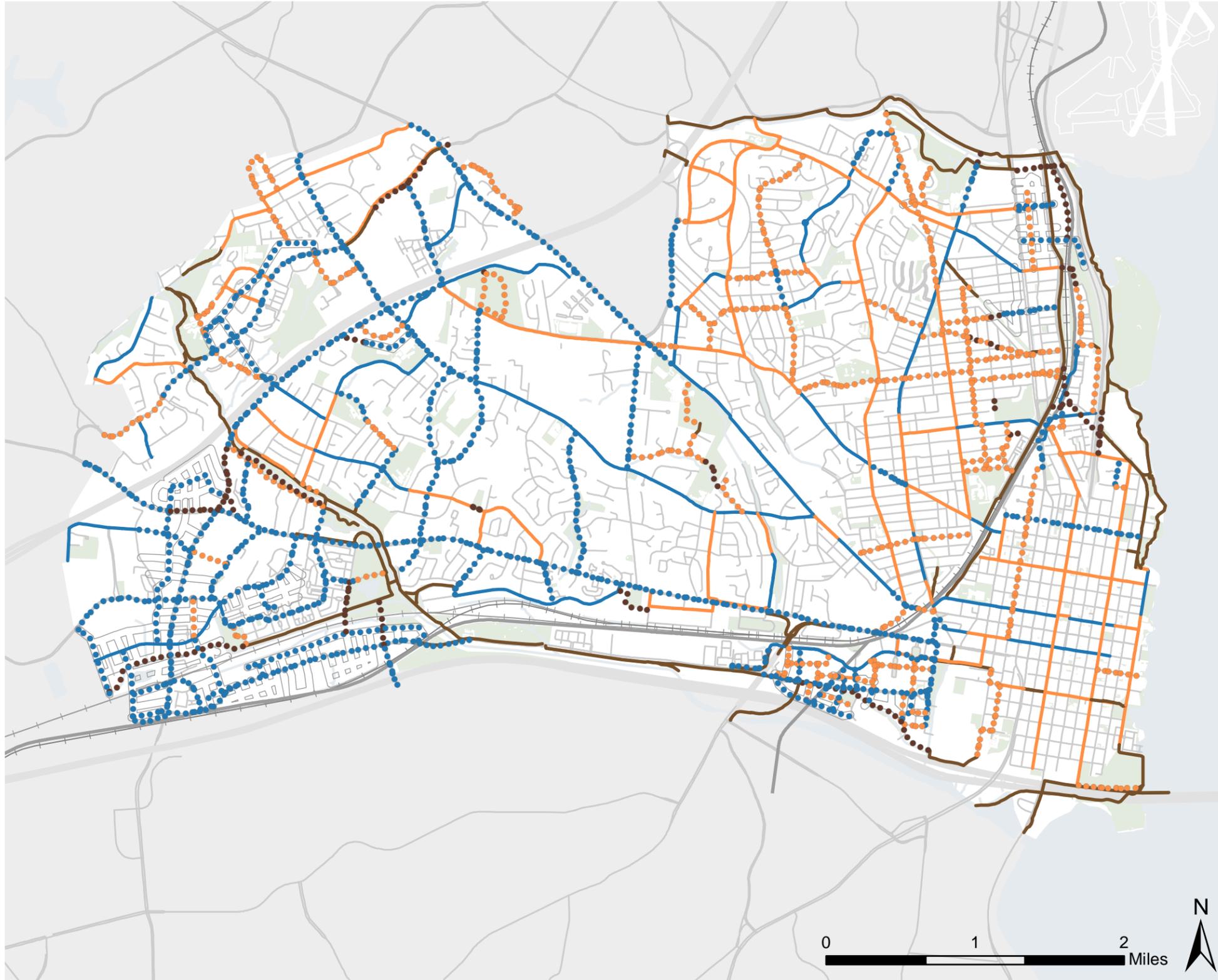


- Tier 1 Priority Sidewalk Gap
- Tier 2 Priority Sidewalk Gap
- Tier 3 Priority Sidewalk Gap
- Tier 4 Priority Sidewalk Gap

Remaining sidewalk gaps as of 2021 and their relative priority identified in the [Pedestrian and Bicycle Chapter update in 2016](#).



Bicycle Priority Projects



Existing Facility

- Dedicated Bike Lanes
- Shared Lane Markings
- Trail/Side Path

Source: City of Alexandria
2021

Planned Bike Network

- Enhanced Bicycle Facility
- Shared Lane Markings
- Trail/Side Path

Source: 2016 Bicycle and
Pedestrian Chapter update

Information contained in this document is for planning purposes. Further analysis and engineering design are necessary prior to implementing any recommended bicycle facilities, including selecting the specific facility type and design for Enhanced Bicycle Facilities. Learn more about facility type definitions on page 49 of the [Pedestrian and Bicycle Chapter update in 2016](#).



Supporting Travel Options

*How the City encourages
alternatives to driving alone.*



Introduction

This chapter focuses on how the City can support alternatives to driving alone through information, incentives, partnerships, and policies to reduce congestion on our streets and make our transportation system more sustainable. These practices—often called Transportation Demand Management (TDM)—are not about forcing people out of their cars, but rather making a variety of transportation options (i.e. transit, carpool, telework, cycling, and walking) easy, accessible, and convenient to give more travel choices to more people.

The development of this chapter was called for in the ***Environmental Action Plan (EAP) 2040*** to improve the City's existing programs that support travel and mobility options to help achieve EAP and ***City Strategic Plan*** goals for reducing vehicle miles traveled in the city and increasing the share of biking, walking, and transit trips.

“

By FY2023, develop a stand-alone Transportation Demand Management Chapter in the Alexandria Mobility Plan (formerly the Transportation Master Plan) to promote low-carbon modes of transportation.

– Short-Term Action 7.2.1, *Environmental Action Plan 2040*

”

Key Context

74%
of trips in Alexandria are non-work trips¹

59%
of trips in Alexandria are less than 3 miles¹

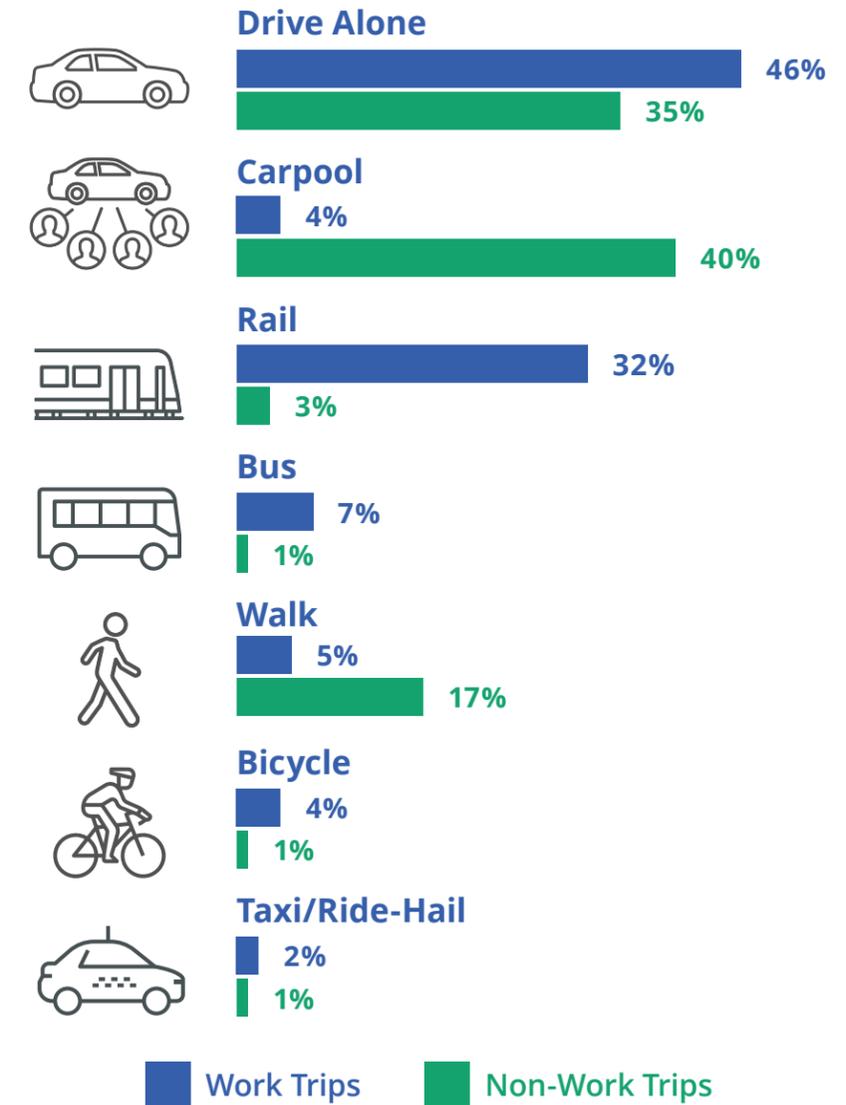
46%
of commute trips in Alexandria are single-occupancy vehicle (SOV) trips¹

36%
of carbon emissions in Alexandria are produced by transportation, making transportation the second-largest emissions-producing sector²

1. 2017-2018 Regional Travel Survey, National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments.

2. City of Alexandria Environmental Action Plan 2040.

Weekday Trips in Alexandria



Source: 2017-2018 Regional Travel Survey, National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments



Existing Programs, Policies, and Initiatives

GO Alex

The City's GO Alex program provides residents, commuters, and employers with resources to help promote mobility options through:

- Developing employer-specific plans and resources
- Assisting in rideshare matching
- Promoting regional incentives to try different transportation options
- Providing travel tools and information across Alexandria

The policies and strategies in this chapter aim to support GO Alex by improving and expanding the reach of its programming to make more people more aware of Alexandria's wide range of travel choices it offers such as bus service, commuter and intercity rail, bikeshare, micromobility, paratransit, and more.



Transportation Management Plans

A transportation management plan (TMP) is a site-specific plan to encourage residents and employees to take public transportation, walk, bike, or share a ride as opposed to driving alone to reduce rush hour congestion. Developers of new buildings are required to submit a TMP that outlines how they will reduce drive-alone trips and report back to the City.

In 2021, there are approximately 65 active TMPs in the city. TMPs help achieve efficient and sustainable use of transportation facilities by providing bikeshare memberships, transit passes, and information to residents and workers.





Policies

The Supporting Travel Options chapter policies will guide the City’s decision-making around increasing availability and encouraging use of flexible and sustainable travel options for all types of trips.

Policy A: Enhance choice

Make it easier for more people to choose an alternative to driving alone.

The City of Alexandria will apply evidenced-based practices that have been demonstrated to be the most effective at reducing drive-alone travel to reduce congestion, improve public health, and make the city more sustainable.

Policy B: Promote work flexibility

Encourage continued telework and flexible schedules to reduce congestion and emissions.

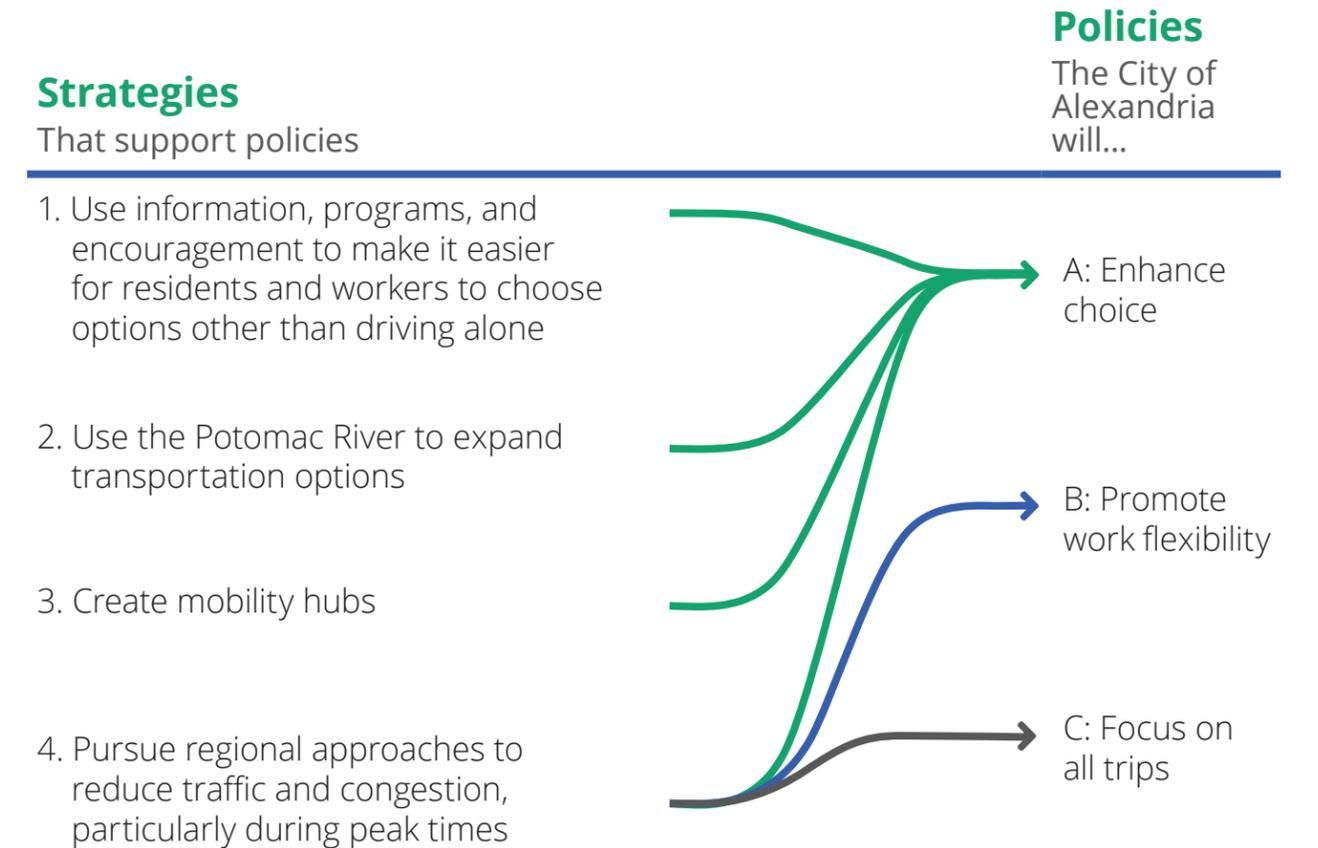
Teleworking and modified work schedules can help shift travel times and alleviate traffic congestion during peak periods. The City of Alexandria will work to encourage broader telework and flexible schedule practices among employers to reduce demand on the transportation network during peak periods.



Policy C: Focus on all trips

Shift non-commute trips away from driving alone.

Outreach and education regarding travel options is traditionally focused on commute-to-work trips, despite that fact that non-commute trips make up three quarters of all trips in Alexandria. The City of Alexandria will work to better understand how to expand mobility options for all travelers, whether they are traveling for school, errands, shopping, recreation, tourism, or other reasons. Reducing dependence on driving not only helps manage congestion, but also promotes a healthier and safer Alexandria. With the potential for long-term shifts in travel and commuting patterns during the COVID-19 pandemic and beyond, considering all types of trips is important.





Strategies

Strategy 1. Use information, programs, and encouragement to make it easier for residents and workers to choose options other than driving alone

Actions

- Identify an expanded set of community influencers (such as religious leaders, school principals, and athletic organizations), in addition to employers and residential property managers, to help encourage alternatives to driving alone
- Update the Transportation Management Plan program so new developments can better reduce and track congestion
- Develop a travel training and commuter assistance program to provide hands-on experience on taking a new (to you) way of traveling
- Expand use of real-time information to promote travel choices



Addressing the Need

Only 20 percent of Alexandrians are aware of GO Alex, the City's program that works to encourage the use of public transit, ridesharing, bicycling, and walking as money- and time-saving alternatives that also are more environmentally-friendly.³ To increase the use of the variety of travel options available in Alexandria, it is important that people know about the program.

It is important that information on travel options—such as transit, bikeshare, car share, and rideshare—is available in one place so travelers can make informed decisions about which they choose.

Improved guidelines for developers can produce more and better-quality data on how new developments are impacting travel patterns and promoting multimodal options.

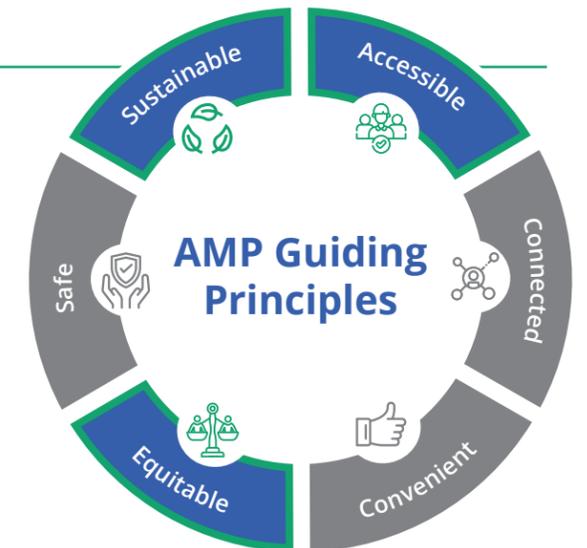
Advancing City Plans and Goals

Environmental Action Plan 2040

- Reduce Automobile Dependency and Educate Individuals and Employers on Mobility Options Other Than Single-Occupancy Driving
- Increase the Share of All Trips Taken by Public Transit, Walking, and Biking by at Least 15 Percent by 2023

City Strategic Plan

- Increase the Percentage of Commuters Using Alternative Transportation Options



Travel training refers to the practice of teaching people to travel independently on different modes of transportation, such as public transit. Travel training programs are intended to encourage behavior changes by giving people a level of comfort with and understanding of travel options that are new to them. These programs can be offered in a group setting or one-on-one and also can be specialized for seniors or people who have cognitive or physical mobility challenges.

3. AlexMoves – City of Alexandria Mobility Survey, 2019.



Strategy 2. Use the Potomac River to expand transportation options

Actions

- Partner with other jurisdictions, agencies, and private partners to determine the best ways to utilize the Potomac River as a transportation option
- Explore and evaluate new water transportation routes and services for commute and trips, errands, or entertainment
- Identify opportunities to integrate with other modes of transportation



Credit: Potomac Riverboat Company

Addressing the Need

There is a need to provide enhanced transportation options and transit connections, especially those that do not impact the city's constrained street network, to make progress toward key environmental priorities such as reducing vehicle miles traveled.

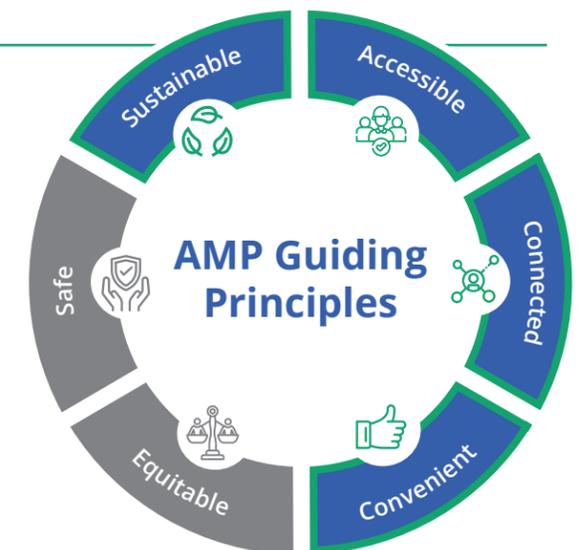
As noted during Alexandria Mobility Plan focus group meetings, the **Potomac River is an underutilized transportation resource** in the region and using it for new travel options could be an effective means of providing alternatives to driving and alleviating congestion.

During the WMATA Platform Improvement Project in the summer of 2019 that shut down Metrorail service in Alexandria, the Potomac Riverboat Company began offering new morning commuter service from Old Town Alexandria to The Wharf in Washington, DC. **This new ferry travel option was well received** among those who opted for it and **did not cause increased traffic or parking challenges at the waterfront**. This strategy will explore ways to build upon the success of that experiment.

Advancing City Plans and Goals

Environmental Action Plan 2040

- Reduce Vehicle Miles Traveled (VMT)





Strategy 3. Create mobility hubs

Actions

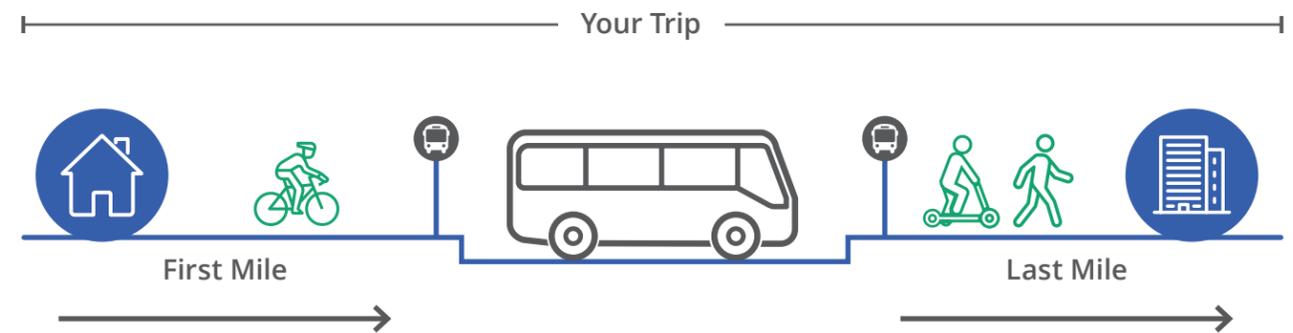
- Identify optimal locations for mobility hubs in strategic locations around the city. These mobility hubs will differ in size and scope based on location type and may incorporate elements to improve navigation for all users of the site through wayfinding and other features
- Incorporate charging infrastructure for carshare vehicles, personal vehicles, and micromobility devices (electric bikes, scooters, etc.)
- Focus on traditionally underserved communities and strategic locations to address first- and last-mile travel needs citywide



Addressing the Need

There is a need to better serve the city—especially areas with more limited transit service—with smaller-scale and more cost-effective travel options that offer alternatives to driving for getting to transit hubs or other short trips. Mobility hubs also provide convenient choices for which modes to use depending on the length and purpose of your trips

A **mobility hub** is a location that brings multiple modes of transportation together in one physical location and are often clustered near high-frequency transit stations such as a Metrorail station. Typical mobility hub components can support short trips and/or first- and last-mile journeys and include bicycle and scooter parking, electric vehicle chargers, carshare vehicles, and pedestrian wayfinding signage.



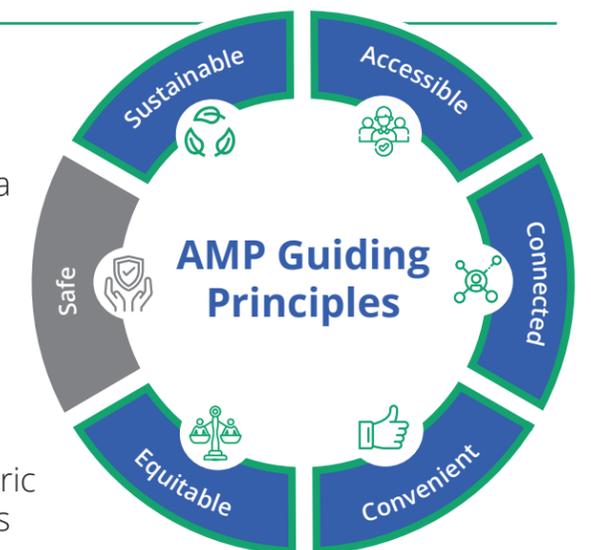
Advancing City Plans and Goals

Smart Mobility Framework Plan

- Improve and Expand Mobility on Demand as a Means to Improve Accessibility
- Plan for Emerging and Future Transportation Technologies

Environmental Action Plan 2040

- Adopt Permanent Regulations for Shared Mobility Devices such as Dockless Bikes, Electric Scooters, and Other Personal Mobility Devices by Fiscal Year 2023





Strategy 4. Pursue regional approaches to reduce traffic and congestion, particularly during peak times

Actions

- Coordinate with neighboring jurisdictions and regional entities to explore unifying local TDM programs into a more comprehensive regional effort
- Advocate for policies that will help manage congestion, such as telework incentives or a regional congestion pricing program
- Continue to support regional transportation initiatives, including Commuter Connections, and targeted TDM initiatives of a regional scale, such as the Northern Virginia Regional Multi-Modal Mobility Program (R3MP)



Addressing the Need

Vehicle miles traveled (VMT)—a measure of how much people are driving—in Alexandria was reduced by 12 percent between 2010 and 2018⁴ mostly due to travel on local streets. However, regional travel has not changed significantly and represents an equal proportion of VMT on City streets. With Alexandria generally bordered on two sides by I-395 and I-495, City streets can be used as cut-through or alternative routes, especially during congested periods. It is important that Alexandria continues to coordinate with regional partners to pursue efforts that will manage transportation demand to further decrease VMT and, thereby, reduce congestion and carbon emissions.

The Northern Virginia **Regional Multi-Modal Mobility Program (RM3P)** leverages “the collaborative use of real-time data by Virginia’s public and private sectors to improve travel safety, reliability, and mobility and to give the public the tools to make more informed travel choices.” The program includes elements such as data-exchange programs, commuter parking information systems, dynamic incentivization, artificial intelligence-based decision support system, and a multi-modal analytical planner. The program advances the use of technology to support jurisdictions and cities to achieve their goals of increasing modal splits and a more dynamic, safe, and efficient transportation system.

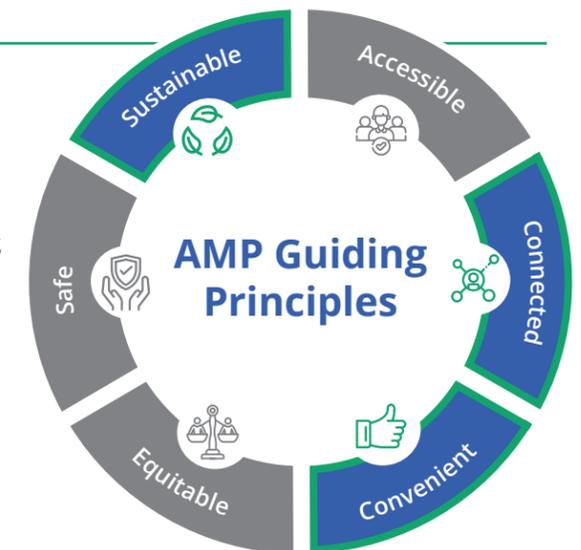
Advancing City Plans and Goals

Environmental Action Plan 2040

- Reduce Automobile Dependency and Educate Individuals and Employers on Mobility Options Other Than Single-Occupancy Driving

City Strategic Plan

- Increase the Percentage of Commuters Using Alternative Transportation Options



4. Vehicle Miles Travelled - Weekday Trends Modeled Region 2005 to 2018, National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments.

Metrics

The strategies and policies in this chapter are intended to move the needle on the following measurable metrics. Additional details on metrics, including applicable targets for future years, can be found in **Appendix II - Monitoring, Reporting, and Key Performance Indicators**.

Metric

Number of community influencers involved with GO Alex

Percent of people taking non-single occupancy vehicles to work (mode share)

Weekday person hours of delay

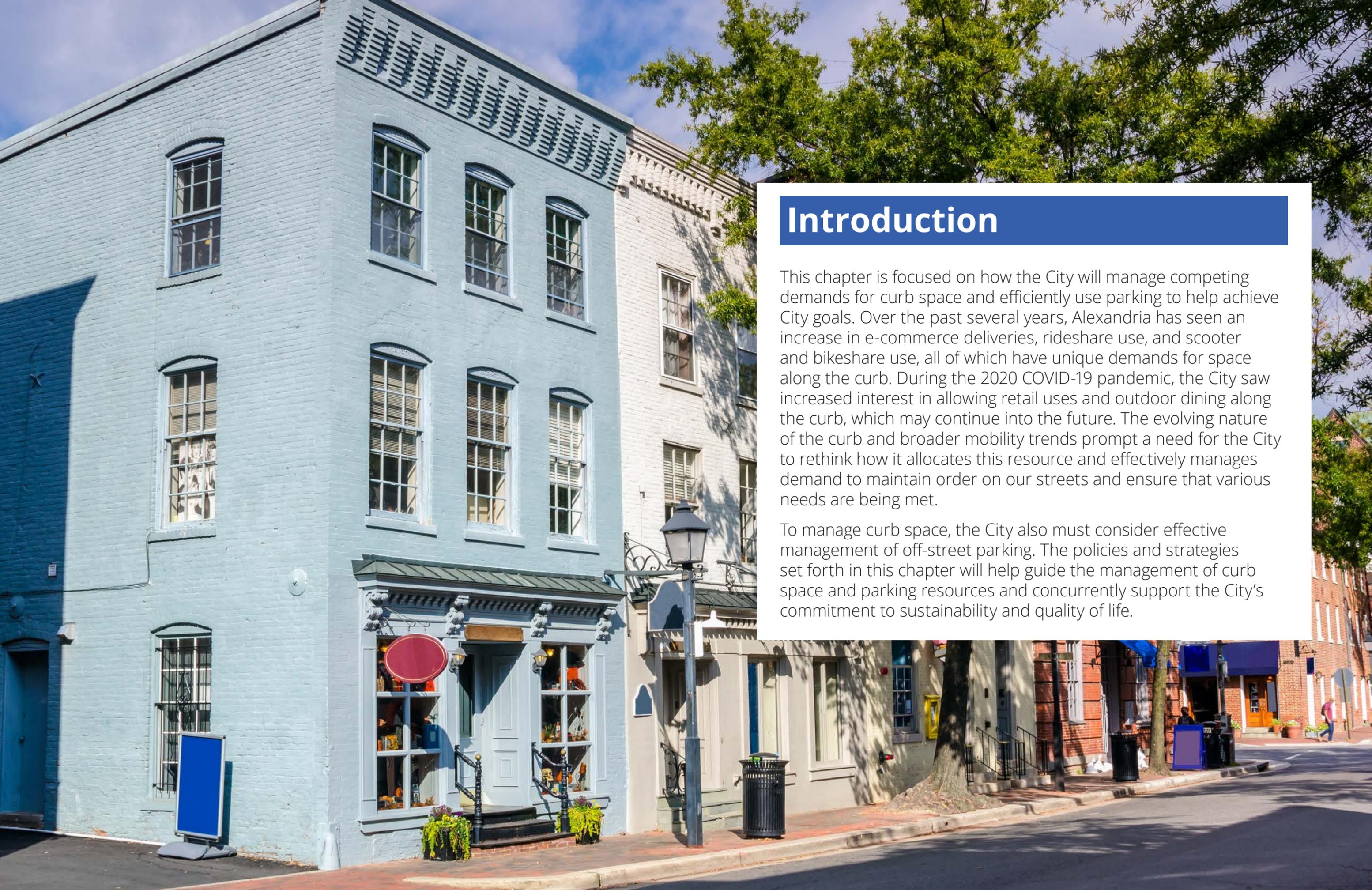


Credit: Hover Solutions for Visit Alexandria



Curb Space and Parking

*How the City regulates parking
and manages curb use.*



Introduction

This chapter is focused on how the City will manage competing demands for curb space and efficiently use parking to help achieve City goals. Over the past several years, Alexandria has seen an increase in e-commerce deliveries, rideshare use, and scooter and bikeshare use, all of which have unique demands for space along the curb. During the 2020 COVID-19 pandemic, the City saw increased interest in allowing retail uses and outdoor dining along the curb, which may continue into the future. The evolving nature of the curb and broader mobility trends prompt a need for the City to rethink how it allocates this resource and effectively manages demand to maintain order on our streets and ensure that various needs are being met.

To manage curb space, the City also must consider effective management of off-street parking. The policies and strategies set forth in this chapter will help guide the management of curb space and parking resources and concurrently support the City's commitment to sustainability and quality of life.



Key Context



126

unique on-street paid parking zones with space for more than 1,400 vehicles across the City

These zones are largely concentrated in Old Town. Street parking generally costs less than parking garages, which disincentives garage use and puts a great strain on street parking.



16

publicly accessible garages

and 6

parking lots

available for paid parking in Old Town

These facilities range in cost, typically featuring flat and hourly rates that cost more than metered street parking.



58%

Alexandrians that have a positive experience with "Availability of parking near my home."¹



52%

Alexandrians that have a positive experience with "Availability of on-street and garage parking."

Ratings for traffic flow, travel by car, overall ease of travel, and public parking among Alexandrians **decreased in 2020** compared to 2018.¹

1. Alexandria 2020 Resident Survey.

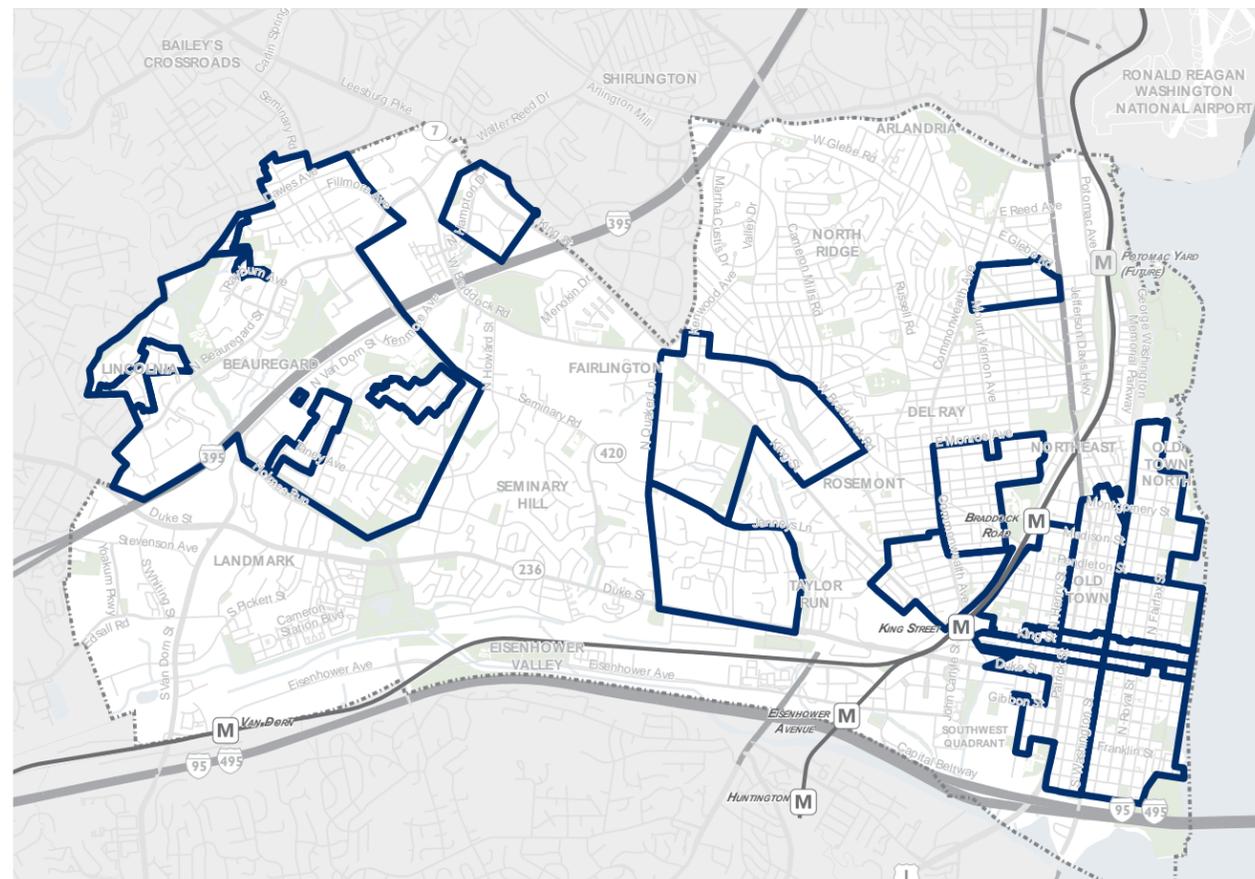




Existing Programs, Policies, and Initiatives

Residential Parking Permit Program

Alexandria’s Residential Parking Permit (RPP) program designates certain areas in the city as residential permit parking districts. As a means to preserve on-street parking in these areas for Alexandria residents, the RPP ordinance prohibits on-street parking for more than 2 or 3 hours during varying time periods. Only persons who maintain their residence within the boundaries of an RPP district are eligible to obtain parking permits, and vehicles that display these permits are exempt from the timed restrictions.



 Residential Parking Permit Districts

Electric Vehicle Charging

The Electric Vehicle Charging Infrastructure Readiness Strategy will develop a road map to anticipate the electric vehicle charging infrastructure needs of City residents, workforce members, and visitors as electric vehicles become more mainstream. The project includes:

- Evaluating projections for current and future electric vehicle charging infrastructure needs
- Recommending locations for publicly accessible charging infrastructure with integration into a broader regional network
- Reviewing and updating the City’s zoning, codes, permitting, and inspection codes and development processes and requirements
- Recommending policies, approaches, and synergies for locating electric vehicle charging infrastructure at businesses, multi-unit dwellings, single-family homes, right-of-way, and other locations along residential and commercial streets

Residential Pay by Phone Program

Certain residential permit blocks within Old Town have been made “pay by phone” for non-residents who choose to park. After a successful pilot, City Council made this permanent in 2019.

Parking Standards for New Development Study

This study, completed in 2018, conducted an assessment of the previous parking standards and established updated standards for new development projects. This update established an Enhanced Transit Area with reduced parking requirements to encourage non-auto travel, and outlined provisions for shared parking.

Micromobility Corrals

In some locations around Alexandria, the City has installed micromobility corrals to maximize curb space and encourage parking of micromobility devices in locations that do not hinder vehicle or pedestrian travel.



Policies

The Curb Space and Parking chapter policies will guide the City's decision-making around smart use of curb space and make parking more efficient and available toward the advancement of City goals.

Policy A: Connect parking policy to City goals

Achieve broader City goals related to sustainability, congestion, and housing affordability through parking.

Parking facilities are expensive to build and maintain, and when it is easy to park, more people will drive. The goals of the Environmental Action Plan to reduce vehicle miles traveled and increase the use of sustainable travel modes require the City to reimagine the curb space. The City of Alexandria will continue to use policy to right-size parking facilities and unbundle the cost of parking from housing to reduce the cost burden of parking on non-vehicle owners and limit its role in contributing to traffic.

Policy B: Ensure parking availability

Seek to maintain parking availability in the city's residential and commercial districts, recognizing that some people may need to walk a short distance to their destination.

The City will seek to ensure a reasonable parking option is available by strategically aligning curb space with its highest and best use and managing on- and off-street parking through technology and pricing.

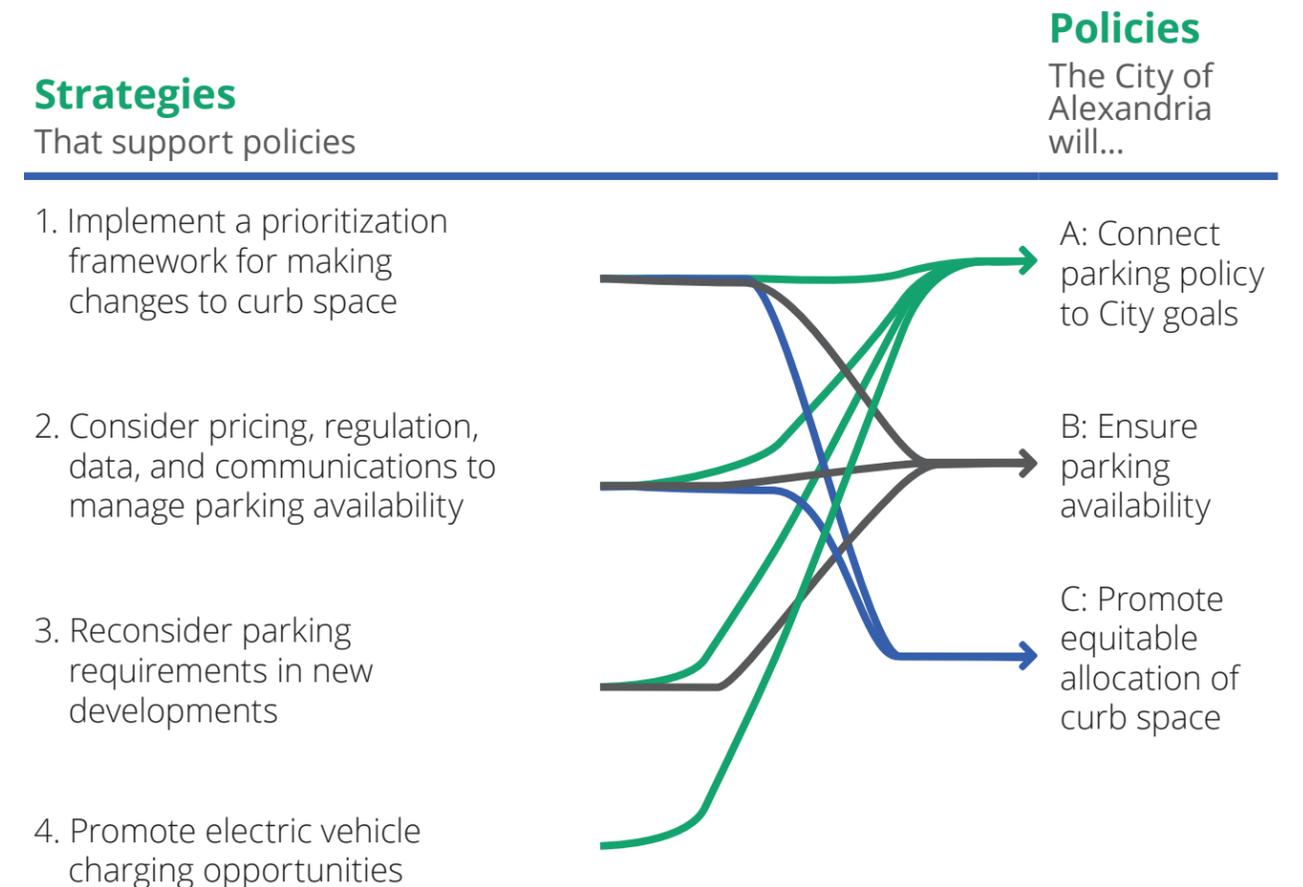
A recent study has demonstrated that in an urban area, more parking led to more car ownership, more driving, more congestion, less transit use, and less walking.²

2. More Parking Puts More Cars on the Road, Sightline Institute. <https://www.sightline.org/2021/01/28/more-parking-isnt-harmless-it-actually-makes-us-drive-more/>.

Policy C: Promote equitable allocation of curb space

Treat all curb space as a public asset that should be allocated in an equitable manner for its highest and best use, appropriate for the specific location, time of day, and time of year.

Recognizing the competing demands over curb space, the City of Alexandria will work to manage this finite resource in a way that considers a diversity of needs and maximizes community benefits and goals. Local context will drive decision-making to ensure that solutions for the curb space use are tailored to needs.





Strategies

Strategy 1. Implement a prioritization framework for making changes to curb space

Actions

- Implement a framework to prioritize parking, loading, drop-off, bike lanes, and mobility hubs, among other uses, when making curbside changes
- Work with the community and the Traffic and Parking Board to apply the framework when a new use is considered on a street

The City's **Curb Space Prioritization Framework** is included at the end of this chapter.



Credit: Misha Enriquez for Visit Alexandria

Addressing the Need

Alexandria's curb space is a valuable commodity and is very much in demand. Many modes of access—pedestrians, parking, transit, bicycles, and commercial and private vehicles—compete for curbside access to shops, restaurants, housing, offices, and community facilities. The City must find a way to balance these needs while encouraging the use of off-street parking and loading when appropriate to reduce the demand for the curb.

Advancing City Plans and Goals

Environmental Action Plan 2040

- Reduce Automobile Dependency and Educate Individuals and Employers on Mobility Options Other Than Single-Occupancy Driving

Complete Streets Policy and Design Guidelines

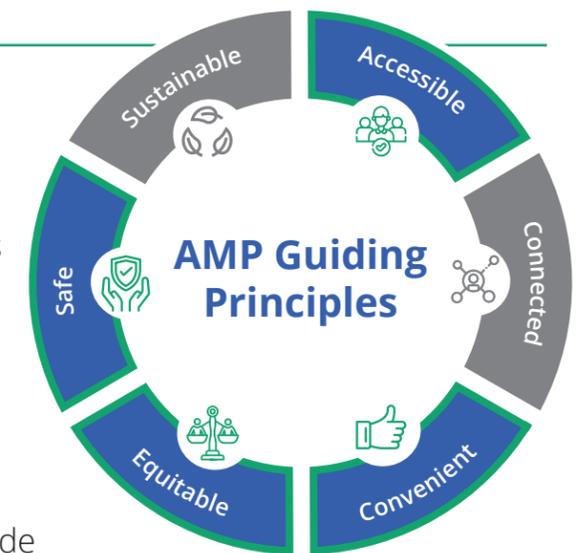
- Accommodate All Modes of Travel and for the Health and Safety of All Users
- Smart and Efficient Management of the Curbside

Age Friendly Plan for a Livable Community

- Those Who Walk, Drive, and Ride a Bicycle in Alexandria Can Do So Safely

Housing Master Plan

- Preserve the Long-Term Affordability and Physical Condition of the Existing Stock of Publicly Assisted Rental Housing, as well as Market Rental Housing Where Affordability Commitments Can Be Secured





Strategy 2. Consider pricing, regulation, data, and communications to manage parking availability

Actions

- Consider technology to collect and disseminate more and better data on parking availability and usage
- Improve signage and availability of real-time information via technology to guide users to off-street parking, pick-ups, drop-offs, and loading to free up on-street curb space whenever reasonable and practicable
- Consider coordinated pricing strategies to encourage more efficient and equitable use of on- and off-street parking spaces
- Improve the perception of safety in garages through improved communications, wifi connections, and cellular service



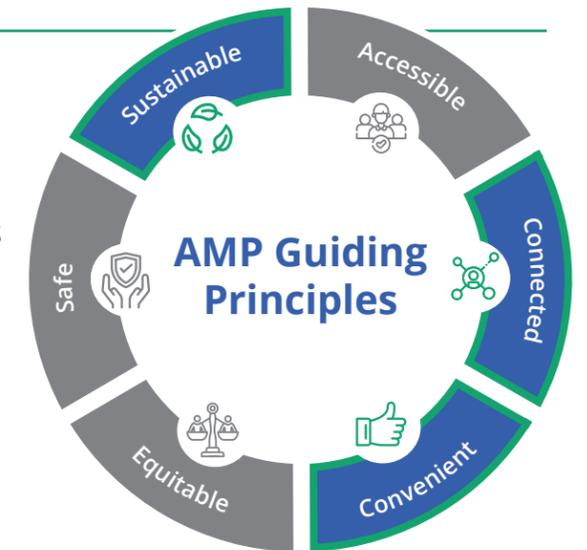
Addressing the Need

The perception that parking is hard to find in certain areas, while not always a reality, can lead to frustration and encourage drivers to circle the block to find available spaces or free parking. By making off-street parking more attractive through pricing or improved information, more people may use it, freeing up on-street spaces and reducing the perception that parking is in limited supply.

Advancing City Plans and Goals

Environmental Action Plan 2040

- Reduce Automobile Dependency and Educate Individuals and Employers on Mobility Options Other Than Single-Occupancy Driving





Strategy 3. Reconsider parking requirements in new developments

Actions

- Build upon recent efforts to right-size parking for residential and commercial development, recognizing that increased parking leads to increased traffic
- Review shared parking section of the zoning and ordinance to identify opportunities to make shared parking more viable. For example, a bank that closes at 5:00 PM and a restaurant that opens at 5:00 PM may be able to share parking facilities
- Leverage the ability of new data sources to regularly evaluate parking uses and trends
- Increase the percentage of parking spaces in new developments that can support electric vehicle charging



Addressing the Need

Parking facilities have several adverse effects on the natural and built environments, including increased stormwater run-off and pollution due to their impervious surfaces; reduced density of land development that hinders the use of sustainable travel options such as walking, biking, or public transit; and increased use of vehicles that can lead to more traffic congestion and air pollution. It is important to reconsider parking standards and requirements to reduce the number of parking facilities that may be larger than necessary.

Updating parking standards can yield several positive outcomes for communities. Maximum standards for off-street parking work to limit the construction of parking facilities that are larger than necessary. Recently, cities such as Hartford, CT and Portland, OR recognized the need to limit parking and established parking maximums in their regulations, thus controlling the amount of land and impervious surface associated with parking. **In Alexandria's recent "Parking Standards for New Development Projects Study - Phase 2," the City also has implemented parking maximums and an Enhanced Transit Area in which requirements are lower.**

Advancing City Plans and Goals

Housing Master Plan

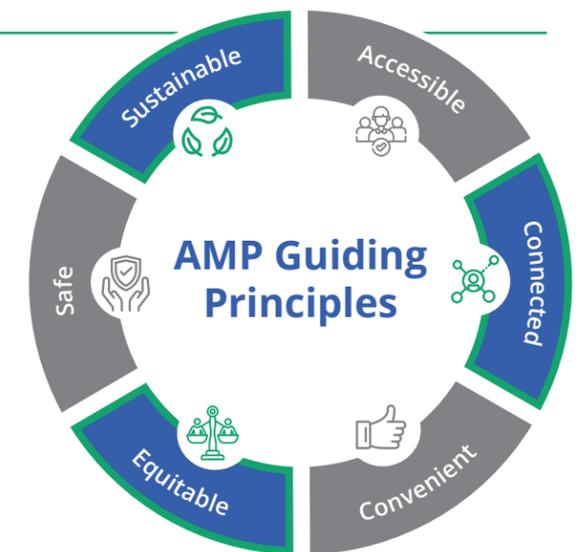
- Preserve the Long-Term Affordability and Physical Condition of the Existing Stock of Publicly Assisted Rental Housing

Environmental Action Plan 2040

- Reduce Automobile Dependency

City Strategic Plan

- Increase the Percentage of Commuters Using Alternative Transportation Options





Strategy 4. Promote electric vehicle charging opportunities

Actions

- Establish electric vehicle (EV) installation checklists for different uses
- Develop a policy for providing public charging infrastructure in public spaces
- Coordinate between parties interested in charging stations



Addressing the Need

Transportation accounts for more than a third of Alexandria's greenhouse gas emissions. Converting more vehicle trips from internal combustion engine vehicle trips to electric vehicle trips can help reduce greenhouse gas emissions, especially as the energy to charge them is anticipated to come from increasingly sustainable and renewable sources. There are a growing number of Alexandrian's who own or are interested in owning electric vehicles, and the increased numbers of EVs will require additional charging infrastructure to support them.

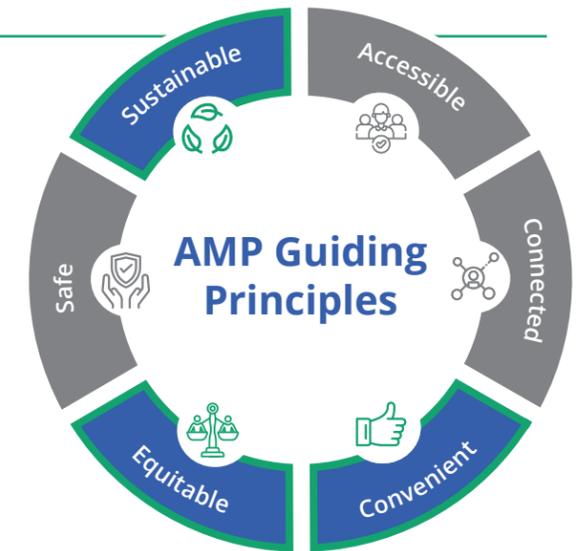
Advancing City Plans and Goals

Electric Vehicle Charging Infrastructure Readiness Strategy

- Meet electric vehicle charging demand

Environmental Action Plan 2040

- Implement and support implementation of publicly-accessible electric vehicle charging infrastructure that is supported by renewable energy



Curb Space Prioritization Framework

This framework sets priorities for curb access based on land uses. Land uses are broadly defined into four categories based on the kinds of curbside activity in different parts of the city.

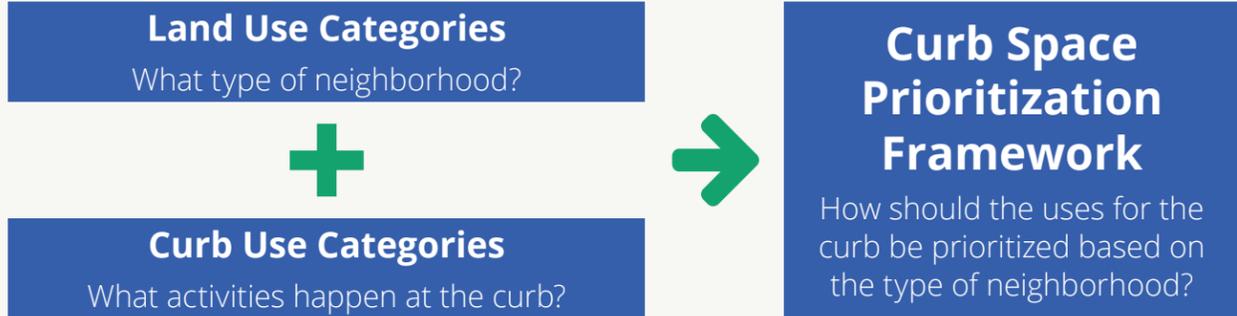
Curb uses are also categorized broadly to enable future mobility options to fit into this framework. For example, previous plans mentioned bus stops, but did not anticipate bikeshare systems, dockless scooters, or ridehail companies like Uber and Lyft.

As part of the Alexandria Mobility Plan, the City has begun the work to realize Strategy 1 and develop a curb space prioritization framework. This framework outlines varying priorities for curb uses in areas of the city, depending on their land use. Staff will use this framework to guide future decisions.

This framework can be applied to existing streets as well as future streets outlined in small area plans.

When evaluating proposals and resident requests that will impact curb space, staff will work through the framework with affected parties to understand the needs and context of the street. This framework helps guide decision-makers when evaluating requests and applications—it is not a proposal for changing the City’s streets.

- The specific context for each block matters. If a proposal is not feasible on a given street, this framework would not apply.
- Not every curb use category will apply to every street. For example, low-density residential streets with available curb space will not need large (or any) changes to provide adequate access for people.
- Higher priority uses will not eliminate lower priorities. Providing access for goods, for example, does not mean that all the parking on a street will be eliminated, but instead that a parking space may be considered for removal to introduce improved access for goods.



Land Use Categories

	Description:	Examples:
Residential	Predominantly residential uses, including detached houses, rowhouses, and apartment buildings	<ul style="list-style-type: none"> • Cameron Station Blvd between Duke St and S. Pickett St • Taney Ave between N. Jordan St and Van Dorn St
Main Streets	Mixed-use neighborhoods with office, residential, and retail uses as well as neighborhood retail corridors	<ul style="list-style-type: none"> • Mt Vernon Ave in Del Ray • King St in Old Town
Office & Commercial	Areas with predominantly office, retail, and other 'Downtown' functions—often high-density and often including residential towers	<ul style="list-style-type: none"> • Eisenhower Ave between Holland Ln and Telegraph Rd in Carlyle • Duke St between Holland Ln and Dulany St
Warehouse and Industrial	Areas with mostly industrial and warehouse uses, including redeveloping areas adding retail uses and residential developments	<ul style="list-style-type: none"> • Wheeler Ave west of S. Early St • S. Pickett St west of Van Dorn St

Curb Use Categories

	Examples:
City Plan Priorities	Safety improvements, bus lanes, bike lanes, green infrastructure, electric vehicle charging, and other items specifically included in City plans
Access for Goods	Loading zones, deliveries, food pick-up/drop-off
Access for People	Bus stops, pick-up/drop-off, bikeshare stations, scooter corrals
Parking	Metered parking, residential parking, bike parking
Activation	Parklets, in-street dining, public art

Curb Space Prioritization Framework

Priority:	Residential	Main Streets	Office & Commercial	Warehouse & Industrial
1: High	City Plan Priorities			
2	Access for People	Access for People	Access for People	Access for Goods
3	Parking	Access for Goods	Access for Goods	Access for People
4	Access for Goods	Activation	Parking	Parking
5: Low	Activation	Parking	Activation	Activation

Metrics

The strategies and policies in this chapter are intended to move the needle on the following measurable metrics. Additional details on metrics, including applicable targets for future years, can be found in **Appendix II - Monitoring, Reporting, and Key Performance Indicators**.

Metric

Number of curb space changes informed by the Curbspace Prioritization Framework introduced to the Traffic and Parking Board

Positive rating of ease of public parking (Resident Survey) *

Positive rating of availability of parking near my home (Resident Survey) *

Positive rating of availability of on-street and garage parking near shopping (Resident Survey) *

Number of publicly accessible level 2 or higher electric vehicle charging plugs per population

* The Alexandria Resident Survey reports results based on race/ethnicity, income, and age in addition to all residents.



Credit: Misha Enriquez for Visit Alexandria



Moving Forward

This plan has outlined a series of ambitious, yet achievable policies, actions, and strategies for Alexandria. It serves as a work plan for staff to improve mobility choices in the community and guides transportation decision-making. It promotes flexibility to adapt to our changing environment and provides a foundation for securing funding to advance existing plans and new projects.

2 Front wheel here

sportworks

A Shared Responsibility for Implementation and Monitoring

Successfully executing the elements of the Alexandria Mobility Plan will take more than the efforts of any one City department. It will take the collective advocacy of citizens, dedication of staff, and leadership from elected officials. In **Appendix I - Implementation** and **Appendix II - Monitoring, Reporting, and Key Performance Indicators**, the specific steps of strategy implementation and process for tracking success is outlined in further detail.



Keeping the Plan Current

In keeping with the overarching policy of adaptability and flexibility, it is important to note that the strategies within this plan are not exhaustive. As new initiatives develop, they will be considered compatible with the AMP as long as they are consistent with AMP policies and help to achieve its targets and guiding principles. Many of the initiatives in this plan will require additional targeted outreach and community engagement as more details are developed.

The City anticipates providing a progress report to the Transportation Commission on an annual basis and assessing the key performance indicators and chapter metrics in 2024, 2027, and 2030. The City intends to conduct an update of the entire plan beginning in 2028, aligning with the target year to achieve the City's Vision Zero goal.

AMP Outcomes

Together, the elements of the plan will lead to tangible and measurable progress toward achieving the plan's vision, guiding principles, and citywide goals to improve not just transportation, but also equity and quality of life.

-  Increased access to high-quality transportation choices for all Alexandrians
-  More and easier connections to jobs, opportunities, and community destinations
-  Better overall experience traveling around the city
-  Reduced number and severity of crashes
-  Increase in non single-occupant vehicle travel



Equitable outcomes for all Alexandrians, especially neighborhoods and populations that have been historically underserved